PROJECT	DESIGNATION
PB-17-0002	
CONTRACT	BRIDGE FILE
	HAMILTON 00004

HAMILTON COUNTY HIGHWAY DEPARTMENT

BRIDGE REHABILITATION PLANS

HAMILTON COUNTY BRIDGE #4
SIX POINTS RD. OVER PRAIRIE CREEK
ADAMS TOWNSHIP, HAMILTON COUNTY, INDIANA
PB-17-0002

STRUCTURE INFORMATION

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
HAMILTON CO. BRIDGE #4	CONTINUOUS REINFORCED CONCRETE SLAB	3 SPANS; 20'-2", 20'-9" & 20'-2" SKEW: 20° LT.	PRAIRIE CREEK	55+00.22

TRAFFIC DATA

A.A.D.T.	(2019)	202 V.P.D.
A.A.D.T.	(2039)	327 V.P.D.
D.H.V	(2039)	31 V.P.H.
DIRECTIONAL DISTRIBUTION		50 %
TRUCKS		3% A.A.D.T.
		3% D.H.V.

DESIGN DATA

DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (Non-Freeway)
FUNCTIONAL CLASSIFICATION	SECONDARY ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

HAMILTON COUNTY
INDIANA

APPROVED BY:
HAMILTON COUNTY BOARD OF COMMISSIONERS

Date: 11/13/18

Mark Heirbrandt — President

Steven C. Dillinger — Member

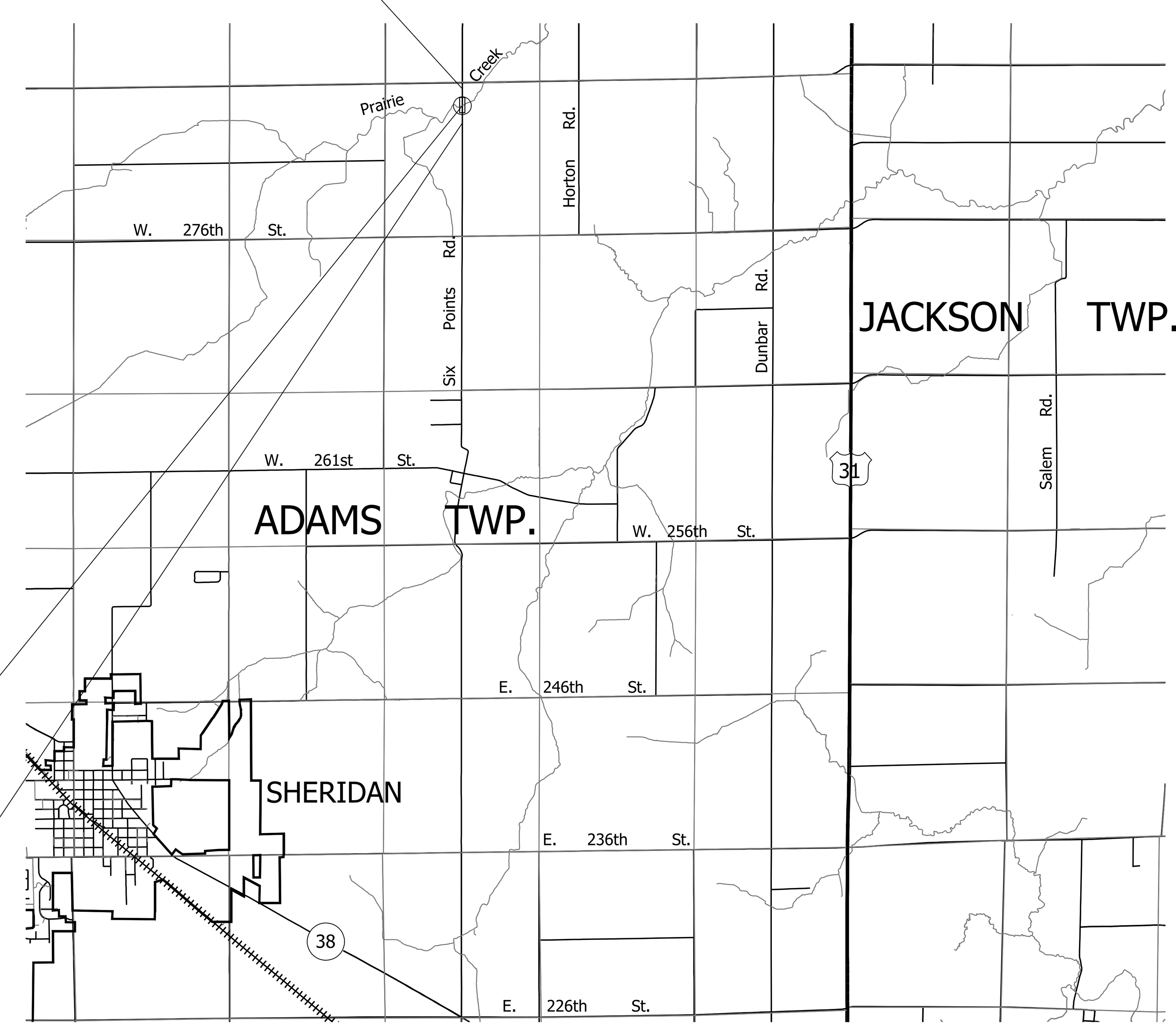
Christine Altman — Member

Robin M. Mills — Auditor

Joel Thurman, P.E. — Acting County Highway Engineer

BRIDGE REHABILITATION ON SIX POINTS RD. OVER PRAIRIE CREEK LOCATED APPROXIMATELY 5.92 MILES NORTH OF SR 38 IN SECTION 10, T20N, R3E, ADAMS TOWNSHIP, HAMILTON COUNTY, INDIANA.

END PROJECT PB-17-0002
Sta. 57+00.00 "B"

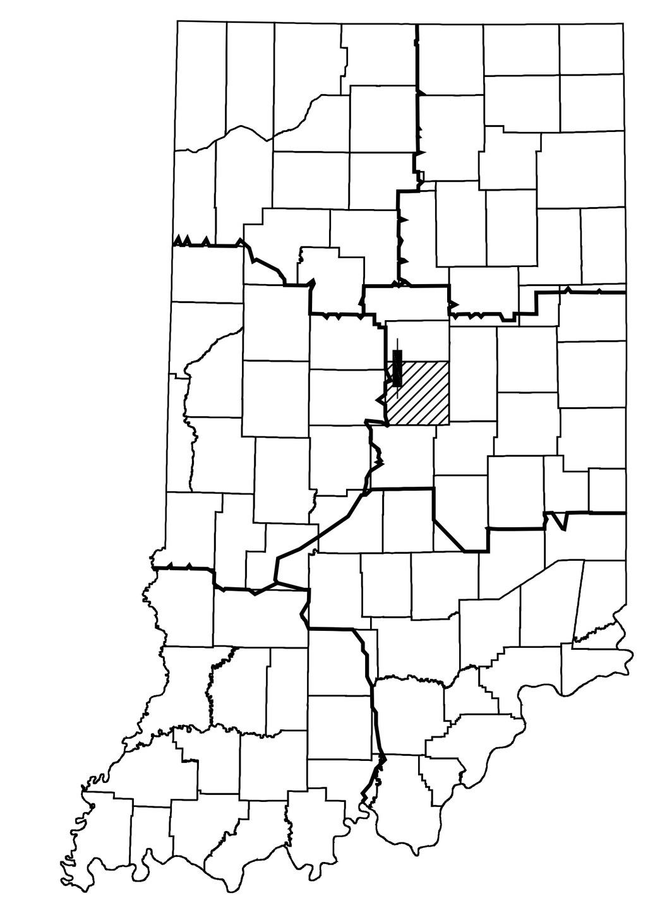


Six Points Rd. Over Prairie Creek
Bridge File: HAMILTON 00004

BEGIN PROJECT PB-17-0002
Sta. 53+47.11 "B"

LOCATION MAP

SCALE: 1"=4000'



PROJECT LOCATION SHOWN BY
(HAMILTON COUNTY)

LATITUDE: 44°12'03" N LONGITUDE: 86°10'33" W

BRIDGE LENGTH:	0.012	MI.
ROADWAY LENGTH:	0.055	MI.
TOTAL LENGTH:	0.067	MI.
MAX. GRADE:	-2.65	%

HUC: 05120201080020

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2018 TO BE USED WITH THESE PLANS

Date: Nov 16, 2018, 1:17pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\Title_Sht.dwg

LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
Phone: 317.222.3880
Toll Free: 888.830.6977

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

PLANS PREPARED BY: LOCHMUELLER GROUP, INC. (317) 222-3880 PHONE NUMBER

CERTIFIED BY: Beth A. Carter 11/7/2018 DATE

BRIDGE FILE	
HAMILTON 00004	
DESIGNATION	

SURVEY BOOK	SHEET
	1 of 34
CONTRACT	PROJECT
	PB-17-0002

UTILITIES

ELECTRIC

Duke Energy
390 North Main St.
Martinsville, Indiana 46151
(765) 349-4012
Contact: Tim Umbaugh
tim.umbaugh@duke-energy.com

COMMUNICATIONS/TELEPHONE

AT&T - Distribution
116 E. Taylor St.
Kokomo, Indiana 46901
(765) 454-5021
Contact: David Smith
DS8383@att.com

PIPELINE

CountryMark Refining and Logistics, LLC
1200 Refinery Road
Mt. Vernon, Indiana 47620
(812) 833-2598
Contact: Jamie Posner
Jamie.posner@countrymark.com

Indiana 811
Know what's **below.**
Call before you dig.

INDEX

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1	TITLE
2	INDEX
3	TYPICAL CROSS SECTIONS LINE "B"
4	PLAT 1
5	MAINTENANCE OF TRAFFIC DETOUR
6	PLAN AND PROFILE LINE "B"
7	CONSTRUCTION DETAIL
8	PROPOSED PAVEMENT MARKING DETAILS
9-10	EROSION & SEDIMENT CONTROL
11-12	SOIL BORINGS
13	REMOVAL PLAN
14-15	GENERAL PLAN
16	FOUNDATION LAYOUT
17-19	END BENT #1 OR #4 CONSTRUCTION & DETAILS
20-22	INTERIOR BENT #2 OR #3 CONSTRUCTION & DETAILS
23-25	SUPERSTRUCTURE DETAILS
26	SCREED SHEET
27	R.C. BRIDGE APPROACH
28	BRIDGE SUMMARY OF QUANTITIES
29	APPROACH TABLE & SUMMARY OF QUANTITIES
30-34	CROSS SECTIONS LINE "B"

GENERAL NOTES

1) Notify the Hamilton County Surveyor's Office at 317-776-8495 a minimum of 30 days prior to construction per Indiana Code. The placement of a benchmark by the Contractor will be required as a part of this project. See Section Corner Monument and Benchmark Placement Special Provision for additinal information.

REVISIONS

SHEET NO.	DATE	REVISED

BETH A. CARTER
REGISTERED
No. 10809459
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: TAM
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

INDEX

HORIZONTAL SCALE	BRIDGE FILE
NONE	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
NONE	
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
	PB-17-0002

Date: Nov 16, 2018, 1:17pm User Name: Tracy
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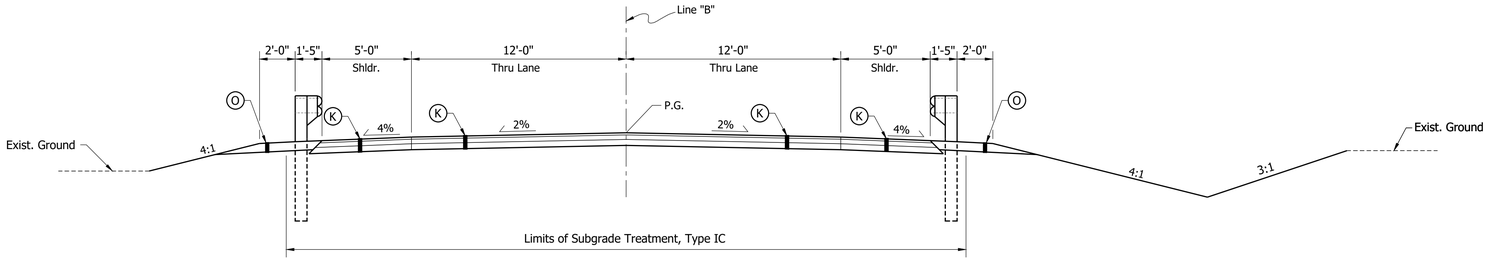
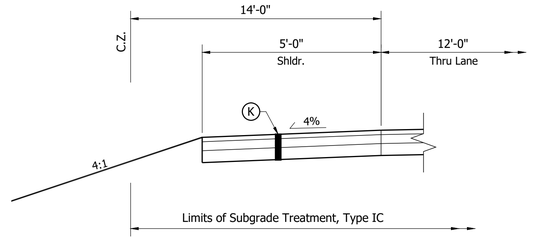


Typical Cross Section With Guardrail

Sta. 53+47.11 to Sta. 54+41.92

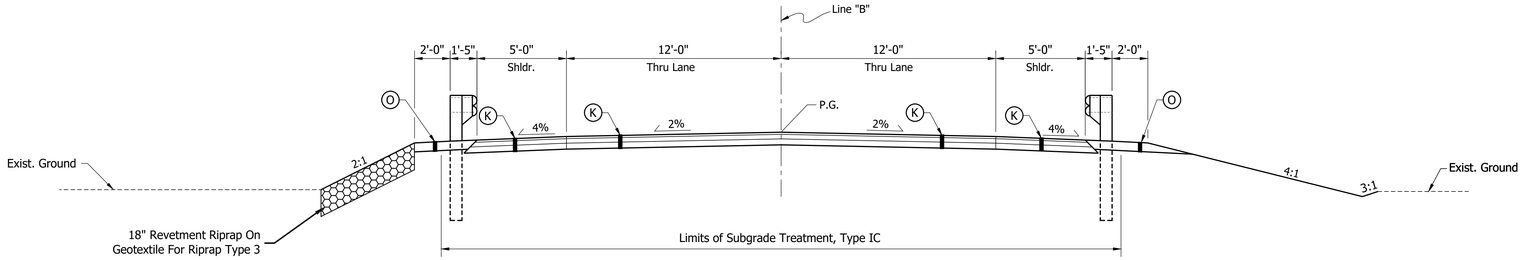
Paving Exception: Sta. 54+41.92 to Sta. 55+58.49



Auxilliary Cross Section

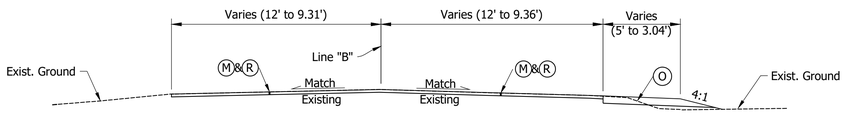
SCALE: ½" = 1'-0"

Sta. 53+47.11 to Sta. 53+97.06 Lt.
Sta. 56+03.36 to Sta. 57+00.00 Rt.
Sta. 56+97.06 to Sta. 57+00.00 Lt.



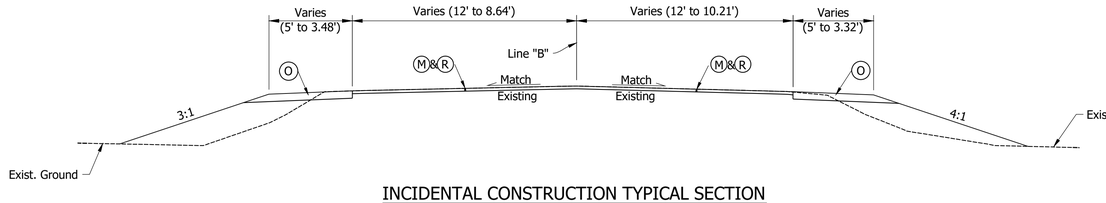
Typical Cross Section With Guardrail

Sta. 55+58.49 to Sta. 57+00.00



INCIDENTAL CONSTRUCTION TYPICAL SECTION

Sta. 52+87.11 to Sta. 53+47.11 Lt. & Rt.
SCALE: 5/16" = 1'-0"



INCIDENTAL CONSTRUCTION TYPICAL SECTION

Sta. 57+00.00 to Sta. 57+60.00 Lt. & Rt.
SCALE: 5/16" = 1'-0"

LEGEND

- (D) HMA for Approaches, Type B 165#/SYD. Type B Surface, 9.5mm
- (K) 165#/SYD. QC/QA HMA, 2, 64 Surface, 9.5mm on 330#/SYD. QC/QA HMA, 2, 64, Intermediate, 19.0mm on 440#/SYD. QC/QA HMA, 2, 64, Base, 25.0mm on Subgrade Treatment, Type IC
- (M) Milling, Approach
- (O) 6" Compacted Aggregate, No. 53
- (R) 165#/SYD. QC/QA HMA, 2, 64 Surface, 9.5mm

C.Z. Clear Zone

Notes:
1. All Disturbed Areas Shall Have Seed Mixture, R; Unless Otherwise Shown.

JEFFREY A. WHITAKER REGISTERED No. 9400259 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 11/7/2018 DATE

DESIGNED: JAW DRAWN: TAM
CHECKED: ACS CHECKED: JAW

HAMILTON COUNTY
HIGHWAY DEPARTMENT

TYPICAL CROSS SECTIONS
LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1/4" = 1'-0"	
SURVEY BOOK	SHEET
	3 of 34
CONTRACT	PROJECT
	PB-17-0002

Date: Nov 16, 2018, 1:17pm User Name: Tracy
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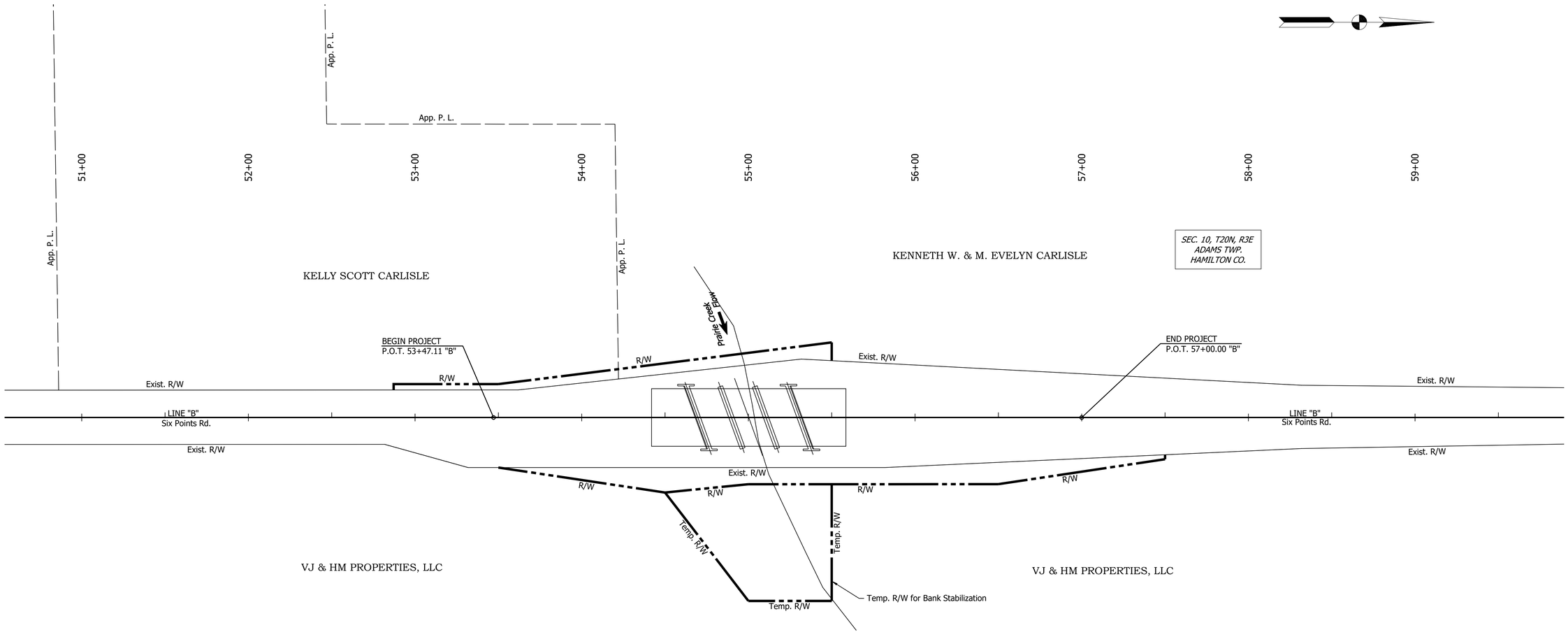

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BETH A. CARTER
REGISTERED
No. 10809459
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

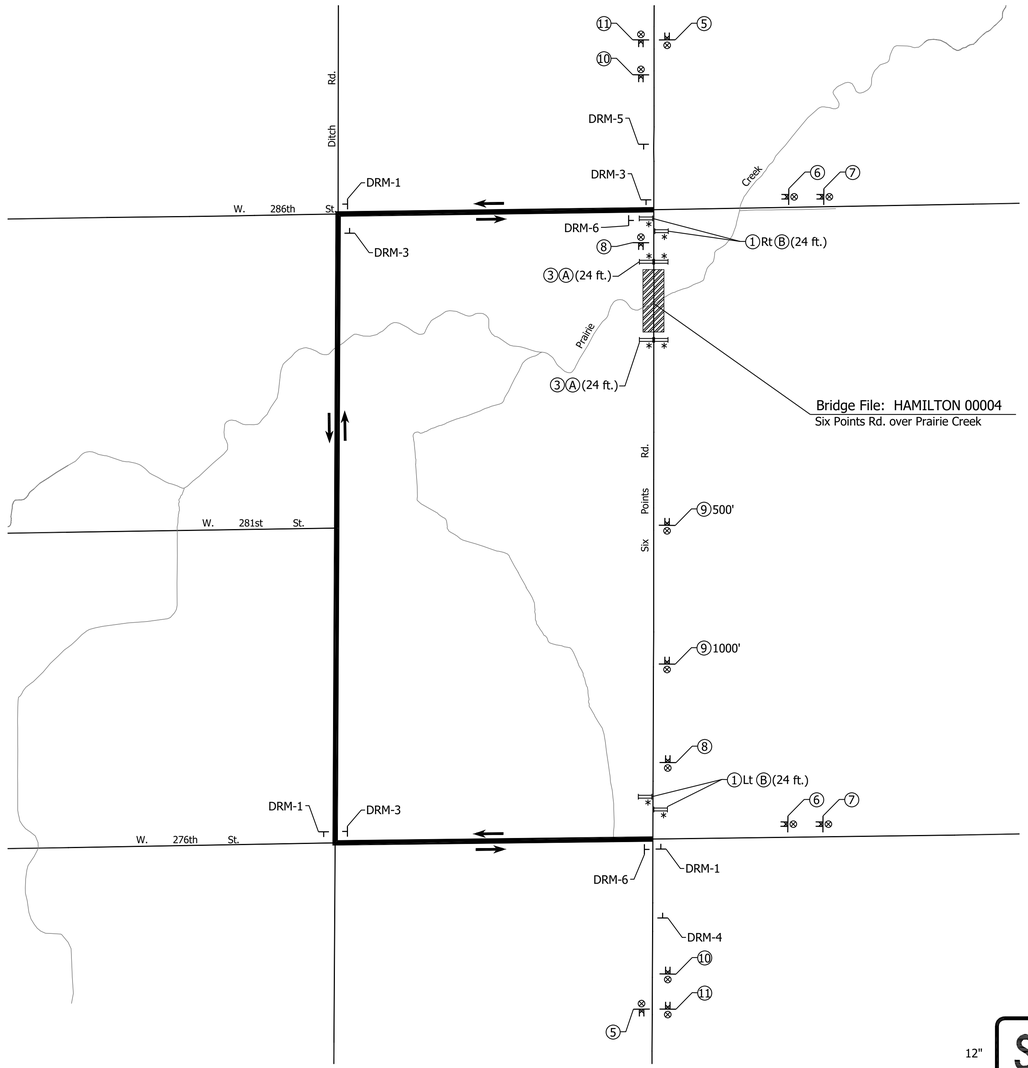
DESIGNED: BAC DRAWN: TAM

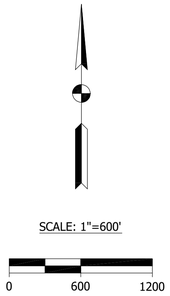
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

PLAT 1

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=30'	
SURVEY BOOK	SHEET
	4 of 34
CONTRACT	PROJECT
	PB-17-0002





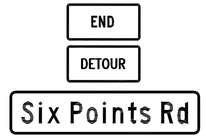
ESTIMATED MAINTENANCE OF TRAFFIC QUANTITIES	
Construction Sign, Type "A"	14 Each
Std. Barricade, Type III-A	48 ft.
Std. Barricade, Type III-B	48 ft.
Road Closure Sign Assembly	4 Each
Detour Route Marker Assembly	10 Each

DRM-1
XM4-8
Sign A
M6-1(S)

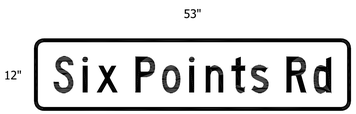
DRM-3
XM4-8
Sign A
M6-1(S)

DRM-4
XM4-8
Sign A
M5-1(L)(S)

DRM-5
XM4-8
Sign A
M5-1(R)(S)



DRM-6
XM4-6(S)
XM4-8
Sign A



Sign A
Detour Route Marker

6" U.C., "B" Series
0.5" Border
1.5" Radius
Encapsulated Lens
Black Copy on Orange Background
Sign Area = 4.42 Ft.^{2}

NOTES

1. Six Points Rd. Shall Be Closed To Thru Traffic From W. 286th St. to W. 276th St.
2. Thru Traffic Shall Be Detoured Along W. 286th St., Ditch Rd. & W. 276th St. Throughout Construction.
3. Access To All Driveways Shall Be Maintained.

LEGEND

- Ⓐ Std. Barricade, Type III-A (Length)
- Ⓑ Std. Barricade, Type III-B (Length)
- ① Road Closure Sign Assembly; R11-4 (Road Closed toThru Traffic) (60x30); XM4-10(R or L) (Detour Arrow) (48x48)
- ③ Road Closure Sign Assembly; R11-2 (Road Closed) (48x30)
- ⑤ Construction Sign A, XG20-2 (End Construction) (60x24)
- ⑥ Construction Sign A, XW20-2 (Detour Ahead) (48x48); Sign A (Six Points Rd)
- ⑦ Construction Sign A, XW20-3 (Road Closed Ahead) (48x48); Sign A (Six Points Rd)
- ⑧ Construction Sign A, XG20-5 (Six Points Rd Closed "Date") (60x36)
- ⑨ Construction Sign A, XW20-3 (Road Closed XX) (48x48)
- ⑩ Construction Sign A, XW20-2 (Detour Ahead) (48x48)
- ⑪ Construction Sign A, XW20-3 (Road Closed Ahead) (48x48)
- Construction Sign
- Detour Route Marker
- ⊗ Construction Warning Light, A
- ✱ Construction Warning Light, B
- Std. Barricade

NOTE:
For Sign Spacing for Detour See Std. Dwg 801-TCDT-01.

JEFFREY A. WHITAKER
REGISTERED
No. 9400259
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 11/7/2018 DATE

DESIGNED: TAM | DRAWN: TAM
CHECKED: JAW | CHECKED: JAW

HAMILTON COUNTY
HIGHWAY DEPARTMENT

MAINTENANCE OF TRAFFIC DETOUR

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
	PB-17-0002

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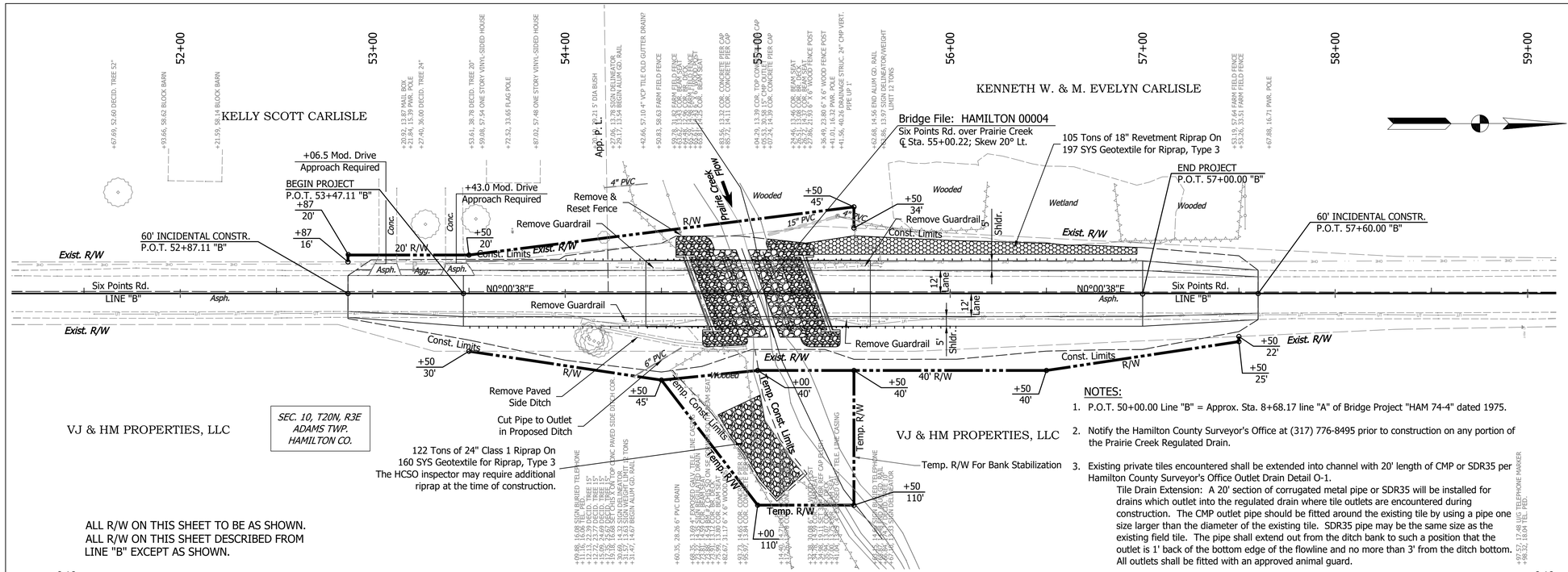


NOTES:

1. P.O.T. 50+00.00 Line "B" = Approx. Sta. 8+68.17 line "A" of Bridge Project "HAM 74-4" dated 1975.
2. Notify the Hamilton County Surveyor's Office at (317) 776-8495 prior to construction on any portion of the Prairie Creek Regulated Drain.
3. Existing private tiles encountered shall be extended into channel with 20' length of CMP or SDR35 per Hamilton County Surveyor's Office Outlet Drain Detail O-1.
   Tile Drain Extension: A 20' section of corrugated metal pipe or SDR35 will be installed for drains which outlet into the regulated drain where tile outlets are encountered during construction. The CMP outlet pipe should be fitted around the existing tile by using a pipe one size larger than the diameter of the existing tile. SDR35 pipe may be the same size as the existing field tile. The pipe shall extend out from the ditch bank to such a position that the outlet is 1' back of the bottom edge of the flowline and no more than 3' from the ditch bottom. All outlets shall be fitted with an approved animal guard.

EXISTING STRUCTURE

ADJACENT PRESTRESSED CONCRETE BOX BEAM BRIDGE
BUILT IN 1975
TO BE REHABILITATED

3 SPANS; SKEW 20° LT.
CLEAR ROADWAY: 26'

RIPRAP & GEOTEXTILE QUANTITIES

	BENT #1	BENT #4
Geotextile For Riprap, Type 3	144 SYS	139 SYS
Class 1 Riprap	98 Tons	93 Tons
	BENT #2	BENT #3
Geotextile For Riprap, Type 3	152 SYS	152 SYS
Class 2 Riprap	162 Tons	163 Tons

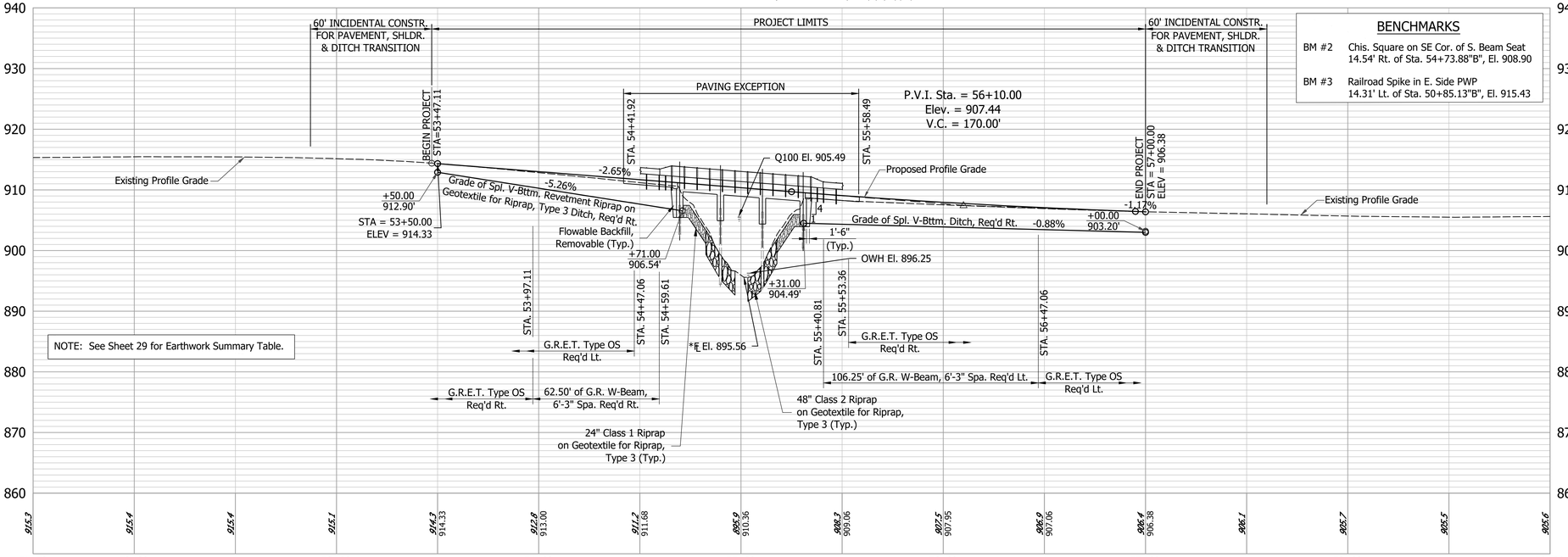
END BENT BACKFILL QUANTITIES

	BENT #1	BENT #4
Flowable Backfill, Removable	12 CYS	12 CYS

DENOTES LIMITS OF 24" CLASS 1 RIPRAP ON GEOTEXTILE FOR RIPRAP, TYPE 3

DENOTES LIMITS OF 48" CLASS 2 RIPRAP ON GEOTEXTILE FOR RIPRAP, TYPE 3

DENOTES LIMITS OF 18" REVETMENT RIPRAP ON GEOTEXTILE FOR RIPRAP, TYPE 3



BENCHMARKS

BM #2 Chis. Square on SE Cor. of S. Beam Seat
14.54' Rt. of Sta. 54+73.88"B", El. 908.90

BM #3 Railroad Spike in E. Side PWP
14.31' Lt. of Sta. 50+85.13"B", El. 915.43

HYDRAULIC INFORMATION

DRAINAGE AREA	=13.34 mi.^{2}
Q100 DISCHARGE	=2330 ft.^{3}/sec.
Q100 ELEVATION	=905.49 ft.
PROPOSED Q100 HEADWATER	=907.12 ft.
GROSS WATERWAY OPENING	=276.02 ft.^{2}
PROPOSED VELOCITY (Q100)	=9.13 ft./sec.
PROPOSED BACKWATER DEPTH (Q100)	=1.51 ft.
PROPOSED WATERWAY OPENING ROAD	=0.0 ft.^{2}
MIN. LOW STRUCTURE ELEV.	=907.92 ft.
EXISTING HEADWATER	=906.97 ft.
EXISTING WATERWAY OPENING	=271.32 ft.^{2}
EXISTING LOW STRUCTURE ELEV.	=907.16 ft.
EXISTING BACKWATER	=1.36 ft.
EXISTING VELOCITY	=9.05 ft./sec.

PROPOSED HYDRAULIC SCOUR DATA

Q100 DISCHARGE	=2330 ft.^{3}/sec.
Q100 ELEVATION	=905.49 ft.
VELOCITY AT Q100	=12.42 ft./sec.
SCOUR DEPTH (CONTRACTION)	=3.37 ft.
SCOUR DEPTH (TOTAL)	=9.22ft.
LOW SCOUR ELEVATION	=884.67 ft.

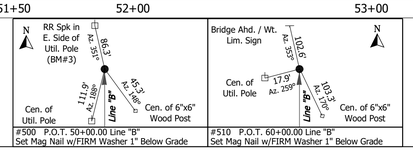
* Flowline elevation shown is taken at the upstream face of the proposed bridge. This elevation differs from what is shown in the Hydraulic Report. The report shows the lowest elevation from the HEC-RAS model (which is 20ft. downstream of the downstream face) to conservatively check for scour.

SIX POINTS RD. OVER PRAIRIE CREEK

CONTINUOUS REINFORCED
CONCRETE SLAB BRIDGE

3 SPANS @ 20'-2", 20'-9" & 20'-2"
CLEAR ROADWAY: 34'-0"
SKEW: 20° LT.

HAMILTON COUNTY, INDIANA



JEFFREY A. WHITAKER
REGISTERED
No. 9400259
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER
11/7/2018
DATE

DESIGNED: JAW DRAWN: TAM
CHECKED: ACS CHECKED: JAW

HAMILTON COUNTY HIGHWAY DEPARTMENT

PLAN AND PROFILE
LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'	
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
	PB-17-0002

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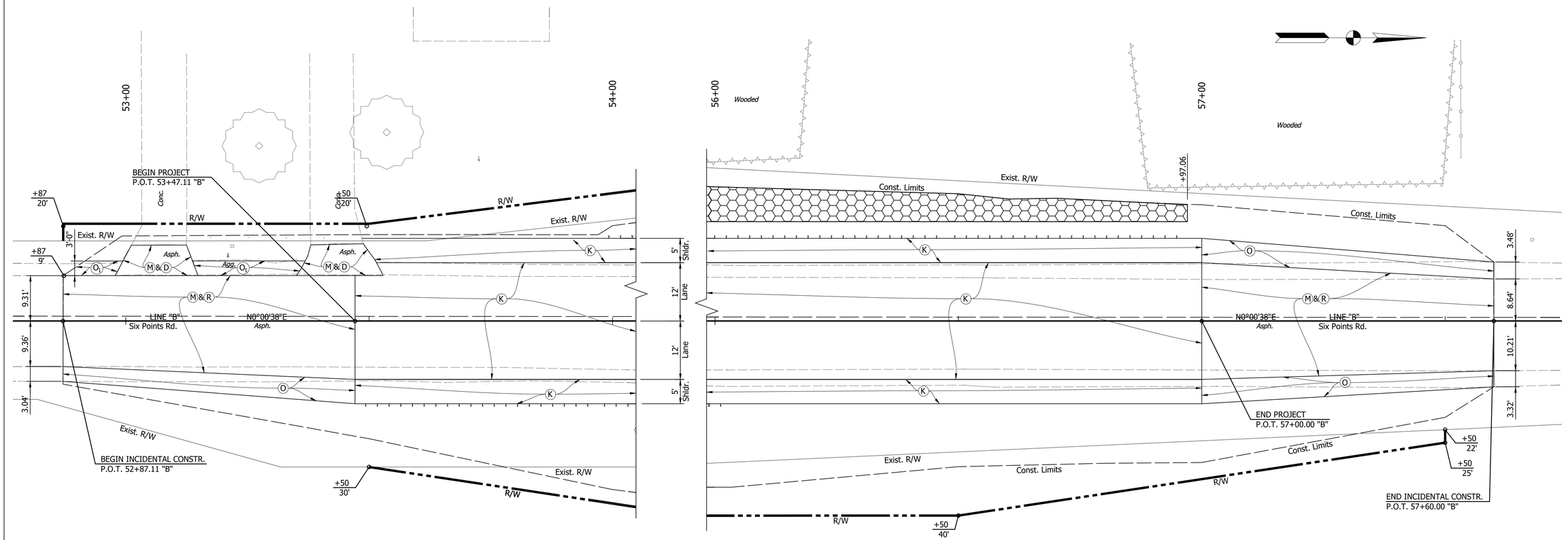

ALL R/W ON THIS SHEET TO BE AS SHOWN.
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "B" EXCEPT AS SHOWN.

LEGEND

- (D) HMA for Approaches, Type B 165#/SYD. Type B Surface, 9.5mm
- (K) 165#/SYD. QC/QA HMA, 2, 64 Surface, 9.5mm on 330#/SYD. QC/QA HMA, 2, 64, Intermediate, 19.0mm on 440#/SYD. QC/QA HMA, 2, 64, Base, 25.0mm on Subgrade Treatment, Type IC
- (M) Milling, Approach
- (O) 6" Compacted Aggregate, No. 53
- (O_1) Variable Depth Compacted Aggregate, No. 53
- (R) 165#/SYD. QC/QA HMA, 2, 64 Surface, 9.5mm

JEFFREY A. WHITAKER
REGISTERED
No. 9400259
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 11/7/2018 DATE

DESIGNED: JAW | DRAWN: TAM
CHECKED: ACS | CHECKED: JAW

HAMILTON COUNTY
HIGHWAY DEPARTMENT

CONSTRUCTION DETAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'	
SURVEY BOOK	SHEET
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	PB-17-0002

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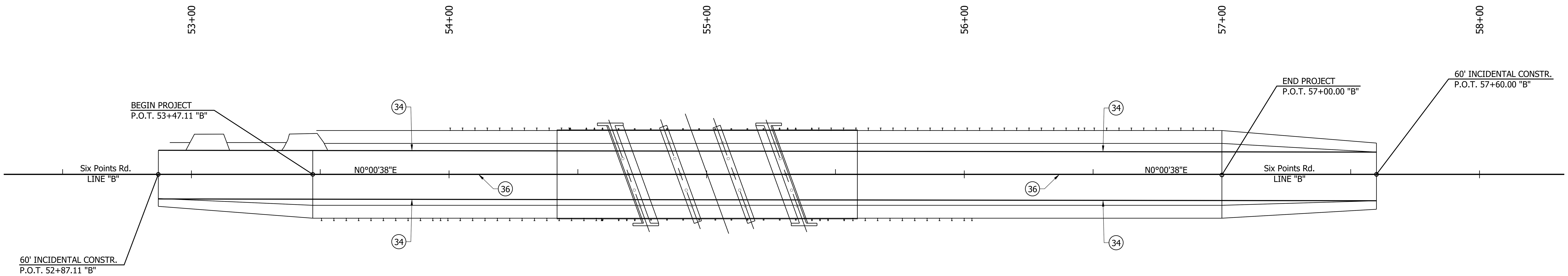

Legend

(34) Line, Paint, Solid, White, 4"

(36) Line, Paint, Broken, Yellow, 4"

PAVEMENT MARKING SUMMARY

LOCATION		PAINT							
FROM STATION	TO STATION	LINE, SOLID, WHITE, 4"	LINE, SOLID, YELLOW, 4"	LINE, BROKEN, YELLOW, 4"	LINE, SOLID, YELLOW, 8"	TRANSVERSE MARKING, CROSSHATCH LINE, YELLOW, 12"	PAVEMENT MESSAGE MARKING, LANE INDICATION ARROW	PAVEMENT MESSAGE MARKING, "R X R"	TRANSVERSE MARKING, STOP LINE, 24"
		Ft.	Ft.	Ft.	Ft.	Ft.	EA.	EA.	Ft.
Line "B"									
52+87.11	57+60.00	946		118					
TOTAL		946		118					

JEFFREY A. WHITAKER REGISTERED No. 9400259 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL [signature] DESIGN ENGINEER 11/7/2018 DATE

DESIGNED: VCH DRAWN: VCH

CHECKED: JAW CHECKED: JAW

HAMILTON COUNTY
HIGHWAY DEPARTMENT

PROPOSED PAVEMENT MARKING DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=20'	
SURVEY BOOK	SHEET
	8 of 34
CONTRACT	PROJECT
	PB-17-0002

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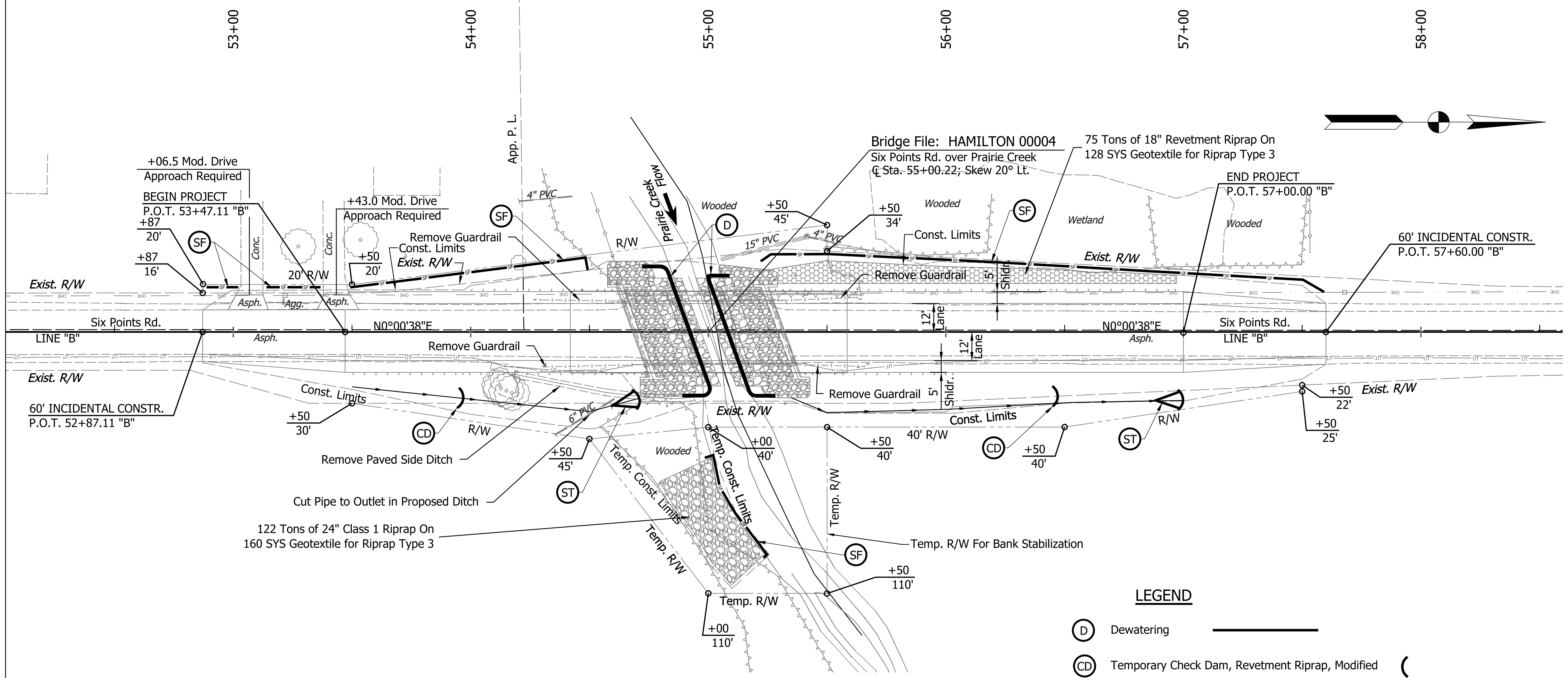


GENERAL CONSTRUCTION NOTES:

1. The Erosion and Sediment Control Measures shall be installed and maintained in accordance with the details shown on the Plans, INDOT Standard Specifications Section 205, INDOT Standard Drawings, and the IDEM Storm Water Quality Manual.

2. Silt Fence shall be installed as needed to protect adjacent properties from receiving sediment-laden runoff. Proposed locations for these measures are shown on the plans, but may be modified and/or replaced based on the phasing and locations of active construction.

3. Rock Filter Berms will be installed where shown on the plans to minimize sediment leaving the project site. Rock filter berms slow runoff, allowing sediment to drop out prior to runoff flowing through the filter stone.

4. Concrete washout areas shall be installed and utilized as containment for washing equipment of uncured concrete and associated liquids. All concrete washout water shall be discharged to a concrete washout area. Locations for washouts are not shown on the plans, but shall be dependent upon field conditions and shall be placed away from inlets and other stormwater conveyances in accordance with the detail shown on the plans.

5. Temporary surface stabilization shall be accomplished by the use of a temporary seeding mixture along with temporary mulching. The temporary seed mixture shall be used to establish a temporary cover for disturbed soils during the construction operations. Temporary seeding shall be placed on disturbed areas that are expected to be idle for over 7 days or as directed by the Engineer. Placement of the temporary surface stabilization shall be as per the INDOT Standard Specifications, Section 205.

6. Where pavement is not proposed, permanent surface stabilization shall be achieved by the use of a seeding mixture, along with mulching material/erosion control blankets and fertilizer or sod. Placement of the permanent surface stabilization shall occur upon final grading in areas and shall be per INDOT Standard Specifications, Section 621, unless otherwise specified.

LEGEND

- (D) Dewatering
- (CD) Temporary Check Dam, Revetment Riprap, Modified
- (ST) Sediment Trap
- (SF) Silt Fence

DEWATERING NOTES:

1. Dewatering of the project area shall be performed using a mechanical pump. A dewatering (filter) bag shall be securely connected to the end of the discharge hose. The suction hose shall be floated as long as possible to prevent the pump from pulling sediment from the bottom of the pooled area.

2. The dewatering bag may be of the single-use or reusable variety and shall be constructed of non-woven, polypropylene geotextile material. Each type and size of dewatering bag can handle varying rates of flow. The bag shall have for following minimum specifications:

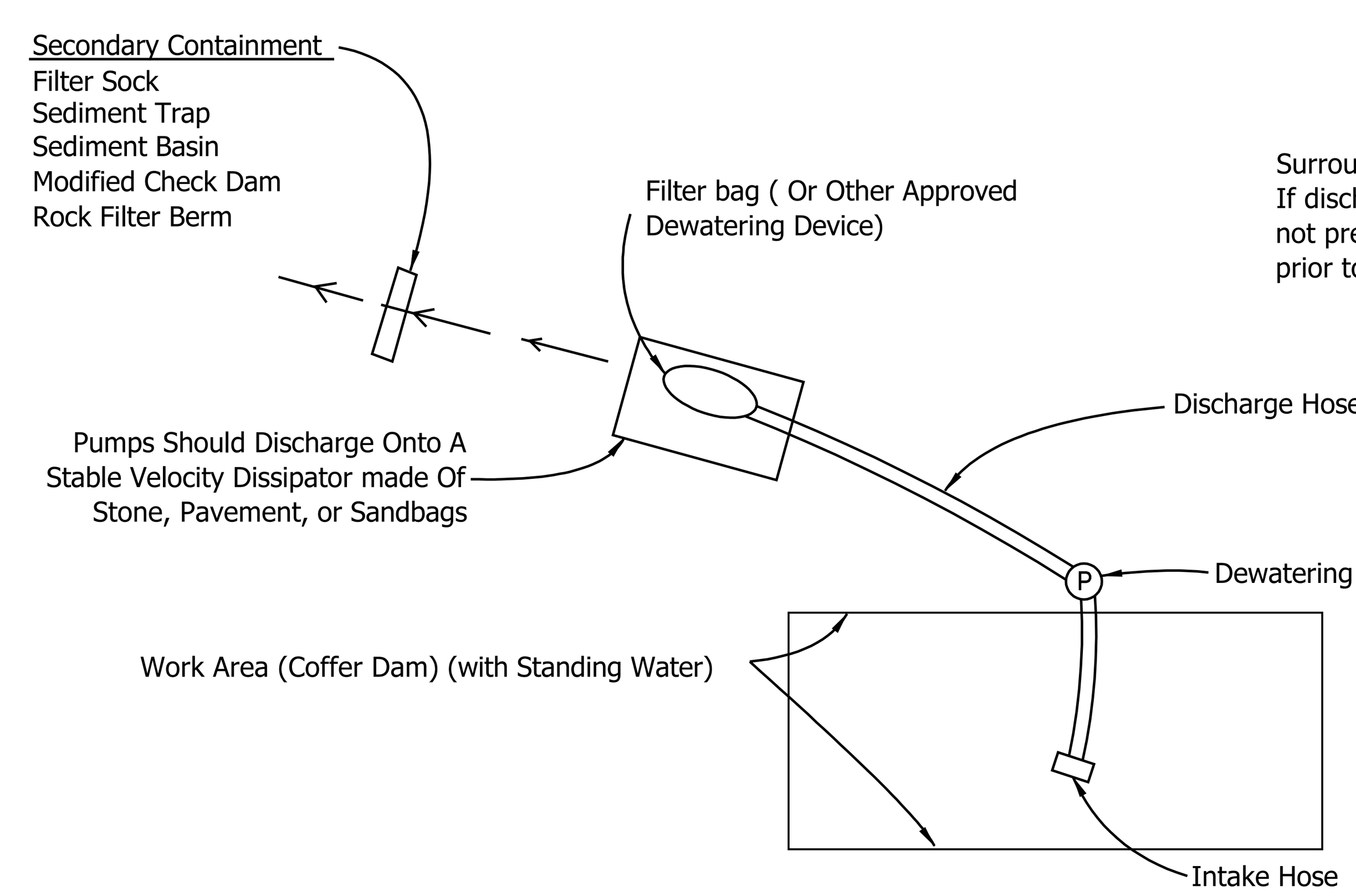
Permittivity	Grab Tensile	Weight	Apparent Opening Size
1.4 sec	200 lbs	8 oz/yd^2	80 US Sieve

3. The dewatering bag shall be placed on a flat surface. Placing the dewatering bag on top of an aggregate base will help to increase to flow through the fabric by providing a larger surface area of discharge.

4. Water shall not be pumped from the project area at a rate faster than the manufacturer's maximum recommended flow rate of the dewatering bag.

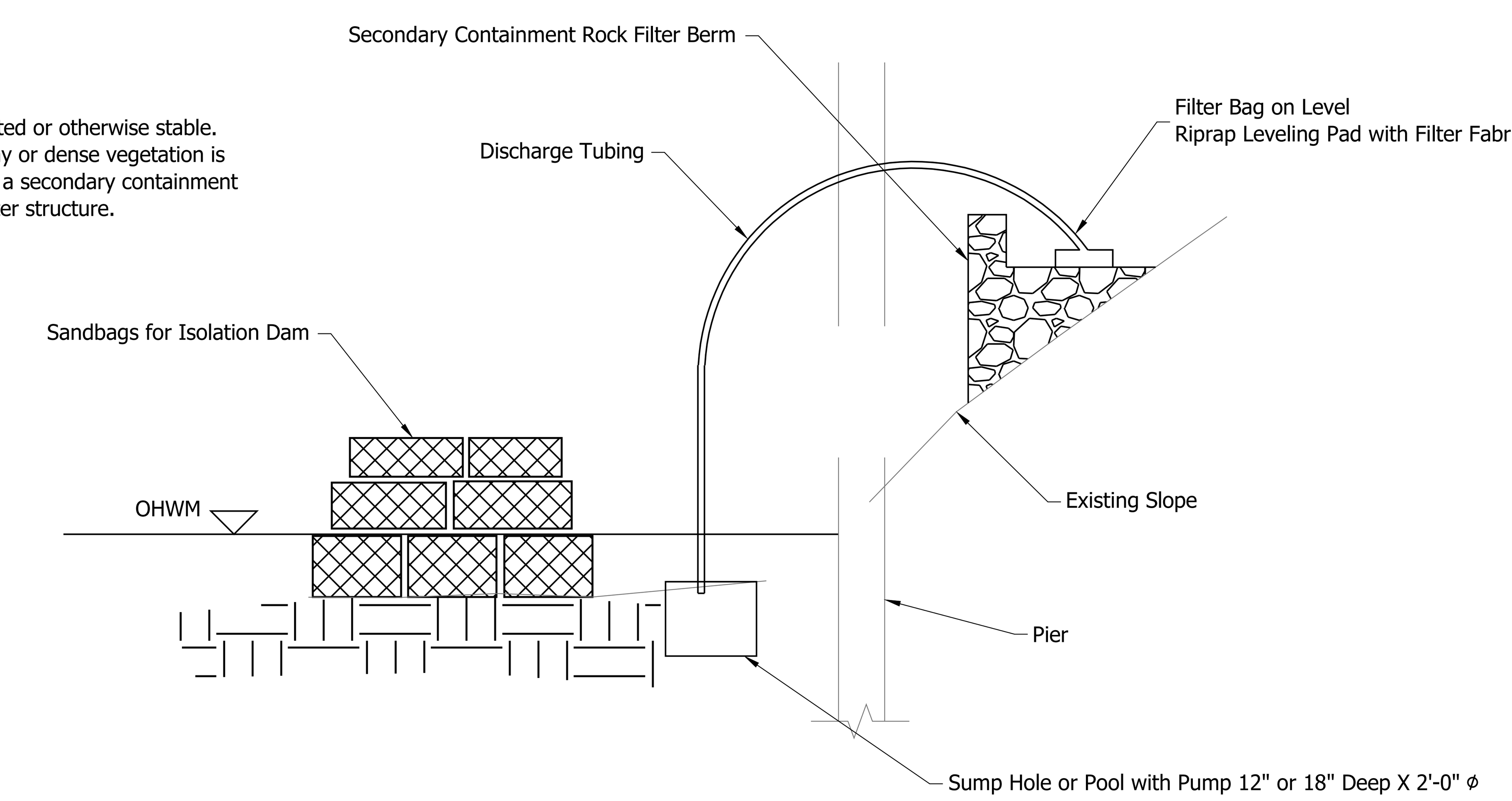
5. Dewatering bags shall be placed in a location in which runoff will pass through additional sediment control measures prior to entering the channel.

6. Following completion of dewatering, the sediment accumulated within the dewatering bag shall be removed from the bag and placed in an upland area.



PLAN

Surrounding area must be densely vegetated or otherwise stable. If discharge is within 30 feet of a waterway or dense vegetation is not present, discharge must filter through a secondary containment prior to reaching a waterway or storm water structure.



SECTION
Cross Section of Work Area

(D) DEWATERING
NOT TO SCALE

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: [signature] DESIGN ENGINEER — DATE 11/7/2018

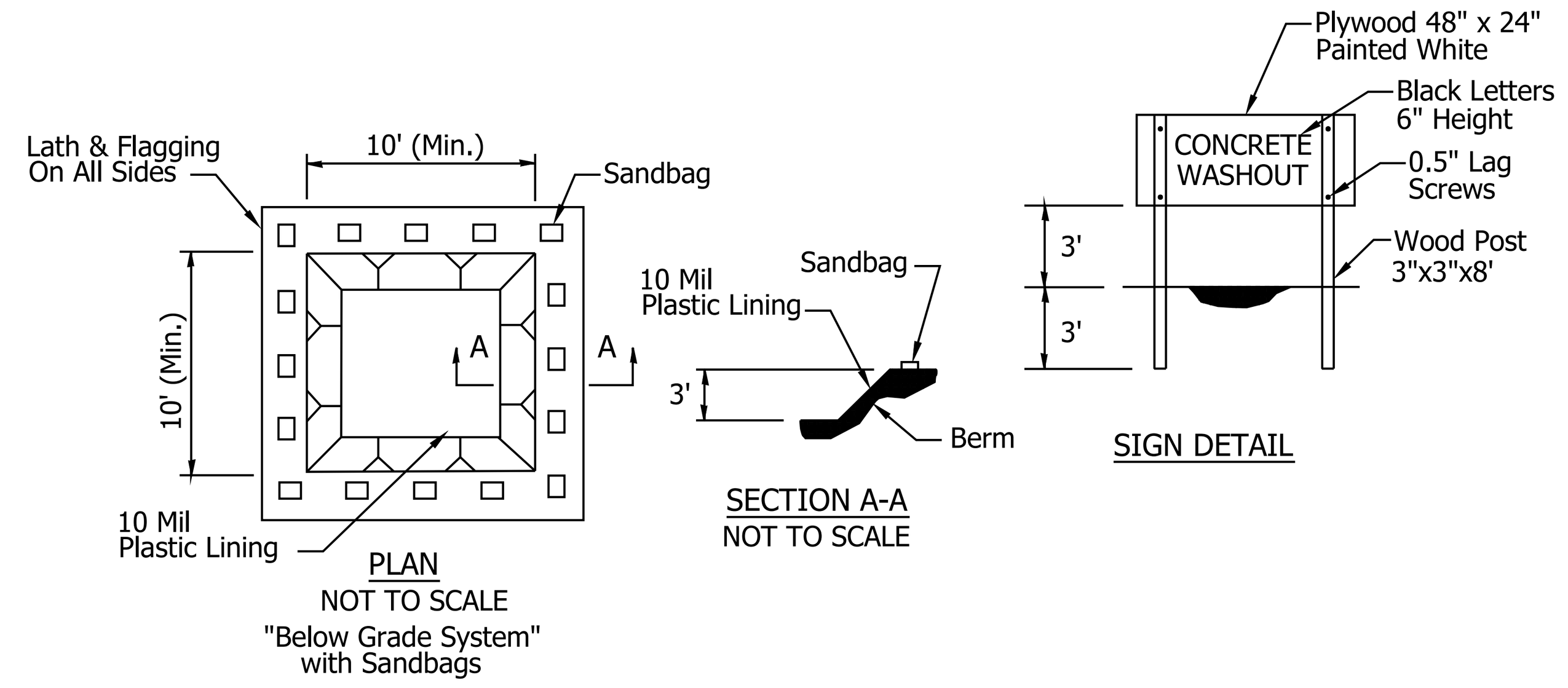
DESIGNED: DLD — DRAWN: VCH
CHECKED: JSK — CHECKED: DLD

HAMILTON COUNTY
HIGHWAY DEPARTMENT

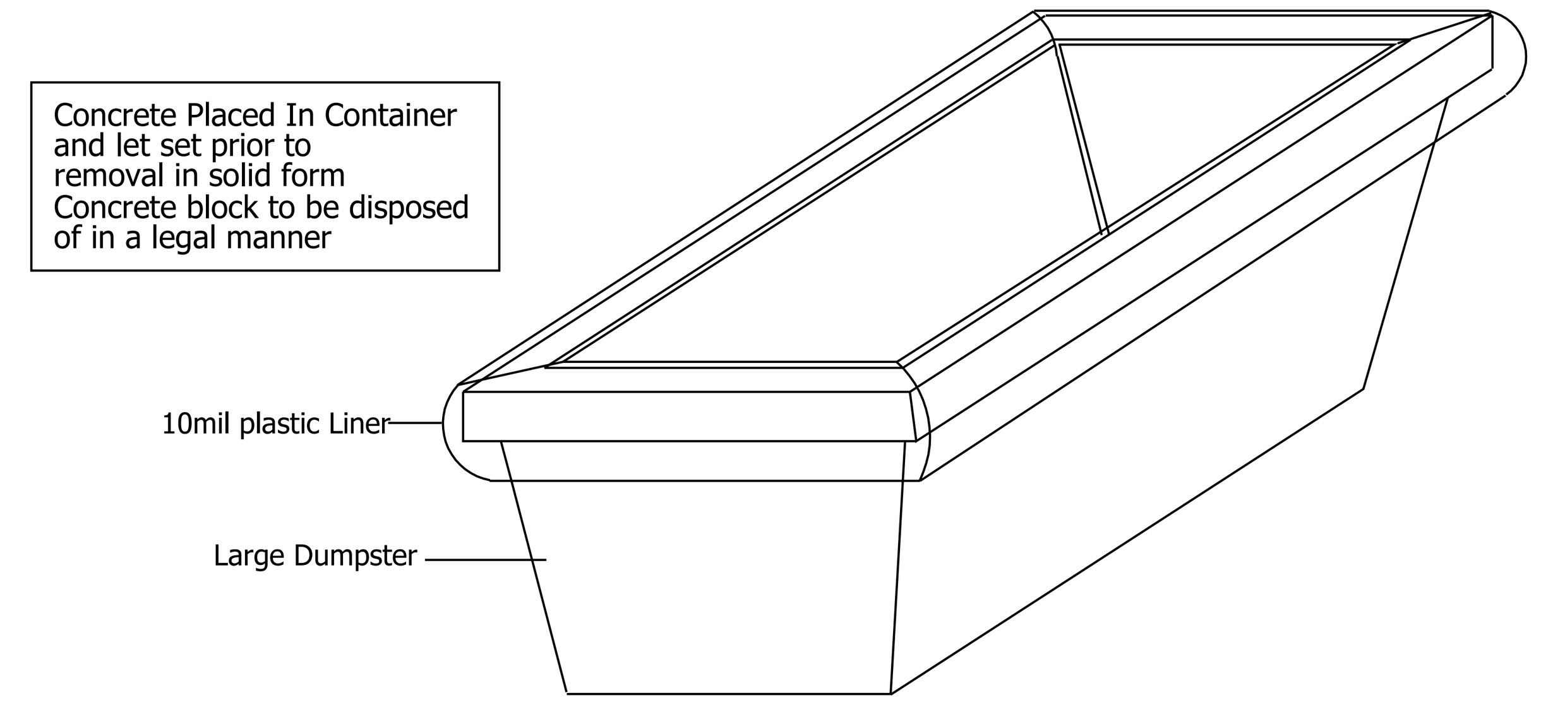
EROSION & SEDIMENT CONTROL
PLAN & DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
	9 of 34
CONTRACT	PROJECT
	PB-17-0002

Date: Nov 16, 2018, 1:20pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\EC_Dtls.dwg



CWO CONCRETE WASHOUT - BELOW GRADE SYSTEM
NOT TO SCALE



CWO CONCRETE WASHOUT - ABOVE GRADE SYSTEM
NOT TO SCALE

PROJECT QUANTITIES	
No. 2 Stone (2 Construction Entrances, Locations Determined in Field)	100 Ton
Sediment, Remove	5 CYS
*Concrete Washout (Locations Determined in Field)	2 Each

*Not Paid for Directly

TEMPORARY SEEDING (0.14 ac)	
Temporary Seeding Mixture (150 lbs/Acre * 2 appl.)	42 lbs
Temporary Mulch (2.5 Ton/Acre * 2 appl.)	1 Ton

INSTALLED UNITS:
Concrete systems can be constructed above or below grade. It is not uncommon to have a system that is partly below grade with an additional containment structure above grade.

* Washout systems shall utilize a pit or bermed area designed and maintained at a capacity to contain all liquid and concrete waste generated by washout operations.
* The volume of the system must also be designed to contain runoff that drains to the system and rainfall that enters the system for a two-year frequency, 24-hour storm event.

BELOW GRADE SYSTEM:
* A washout system installed below grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanout periods. The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the entire excavation area.
* Include a minimum 12-inch freeboard to reasonably ensure that the structure will not overtop during a rain event.
* Line the pit with impermeable 10-millimeter polyethylene lining to control seepage.
* The bottom of the excavated pit should be above the seasonal high water table.

ABOVE GRADE SYSTEM:
* A washout system built above grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanout periods. The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the berm or containment.
* The system design may utilize an earthen berm, straw bales, sandbags, or other acceptable barriers that will maintain its shape and integrity and support the polyethylene lining.
* Include a minimum four-inch freeboard as part of the design.

MATERIALS:
* Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of appropriate size to fit the washout system without seams or overlap of the lining.
* Signage
* Orange safety fencing or equivalent.
* Sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade system)
* Metal pins or staples at a minimum of six inches in length, sandbags, or alternate fasteners to secure polyethylene lining to the containment system.
* Non-collapsing and non-water holding cover for use during rain events. (optional)

INSTALLATION:
* Utilize and follow the design in the storm water pollution prevention plan to install the system.
* Dependent on the type of system, either excavate the pit or install the containment system.
* A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
* Install the polyethylene lining. For excavated systems, the lining should be extended over the entire excavation. The lining for bermed system should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
* Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
* Place non-collapsing, non-water holding cover over the washout facility prior to predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
* Install signage that identifies concrete washout areas.
* Post signs directing contractors and suppliers to designated locations.
* Where necessary, provide stable ingress and egress or alternative approach pad for concrete washout systems.

SPECIFICATIONS:
* Complete construction/installation of the system and have washout locations operational prior to concrete delivery.
* Do not wash out concrete trucks or equipment into storm drains, wetland, streams, rivers, creeks, ditches, or streets.
* Never wash out into storm sewer drainage systems. These systems are typically connected to natural conveyance system.
* Where necessary, provide a stable ingress/egress.
* It is recommended that a washout system be restricted to washing concrete from mixer and pump trucks and not used to dispose of excess concrete or residual loads due to potential to exceed the capacity of the system. Small amounts of excess or residual concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.
* Install system at strategic locations that are convenient and in close proximity to work areas and in sufficient number to accommodate the demand for disposal.
* Install signage identifying the location of the concrete washout system.

LOCATION:
* Locate concrete washout systems at least 50 feet from any creek, wetlands, ditches, karst features, or storm drains/man made conveyance systems.
* To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from adjacent land areas.
* Locate in areas that provide easy access for the concrete trucks and other construction equipment.
* Locate away from other construction traffic to reduce the potential for damage to the system.

Signs shall be placed at all Concrete Washout locations.

MAINTENANCE:
* Inspect daily and after each storm event.
* Inspect the integrity of the overall structure including, the system for leaks, spills and tracking of soil by equipment.
* Inspect the polyethylene lining for failures, including tears and punctures
* Excess concrete should be removed when the washout system reaches 50% capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure.
* Upon removal of solids, inspect the structure. Repair as needed or construct new system.
* Dispose of concrete in a legal manner. Reuse the material on site where applicable, recycle or haul the material to an approved construction/demolition landfill site.
* The plastic liner should be replaced after every cleaning; the removal of material will usually damage the liner.
* The washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
* Inspect construction activities on a regular basis to ensure suppliers, contractors and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violator and take appropriate action.
* When the system is no longer required, the concrete washout system shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
* Holes, depressions and other land disturbances associated with the system should be backfilled, graded and stabilized

CD TEMPORARY CHECK DAM, REVETMENT RIPRAP

FROM STATION	TO STATION	LEFT	RIGHT	NO. CHECKS	REVETMENT RIPRAP	FILTER STONE	TEMPORARY GEOTEXTILE
				(EACH)	(TONS)	(TONS)	(SYS)
Line "B"							
53+50	54+71		X	1	6.0	0.25	12.9
55+31	57+00		X	1	6.0	0.25	12.9
TOTAL:					12.0	0.50	25.8

SF TEMPORARY SILT FENCE

FROM STATION	TO STATION	LOCATION	TOTAL LENGTH
			(LFT)
Line "B"			
52+88	53+02	Lt.	15
53+13	53+40	Lt.	30
53+50	54+50	Lt.	105
54+97	55+26	Rt.	55
55+20	57+60	Lt.	240
TOTAL:			445

ST TEMPORARY SEDIMENT TRAP

FROM STATION	TO STATION	LEFT	RIGHT	NO. CHECKS	REVETMENT RIPRAP	FILTER STONE	TEMPORARY GEOTEXTILE
				(EACH)	(TONS)	(TONS)	(SYS)
Line "B"							
53+50	54+71		X	1	18.0	0.75	38.7
55+31	57+00		X	1	18.0	0.75	38.7
TOTAL:					36.0	1.50	77.4

Date: Nov 16, 2018, 1:20pm User Name: Tracy
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BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter DESIGN ENGINEER 11/7/2018 DATE

DESIGNED: DLD DRAWN: VCH
CHECKED: JSK CHECKED: DLD

HAMILTON COUNTY
HIGHWAY DEPARTMENT

EROSION & SEDIMENT CONTROL
DETAILS & TABLES

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
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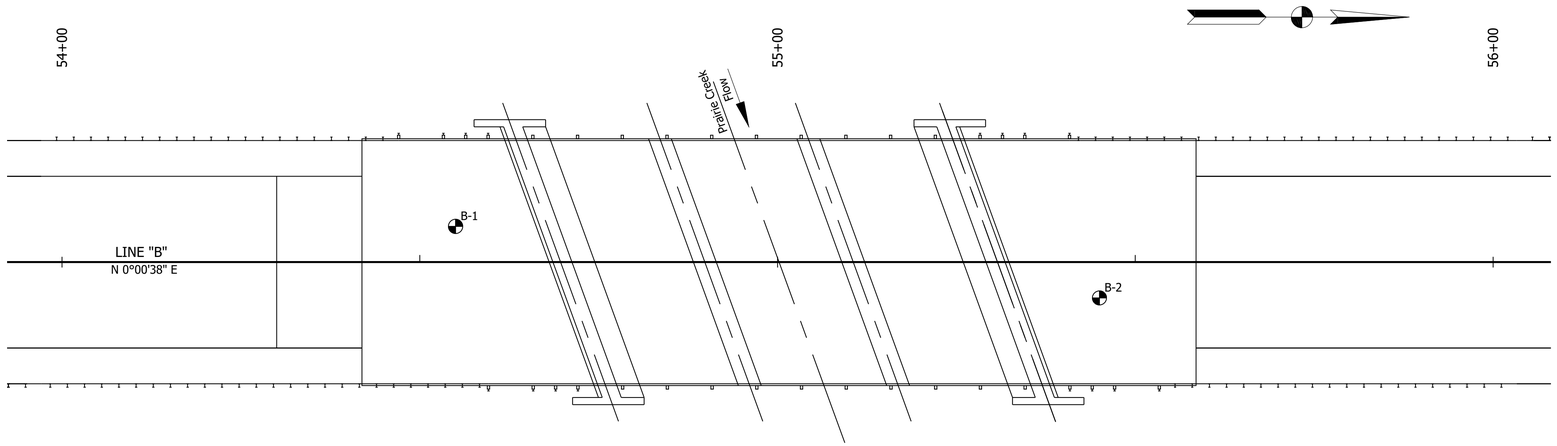
SURVEY BOOK	SHEET
	10 of 34
CONTRACT	PROJECT
	PB-17-0002



PILE LOADING FOR GEOTECHNICAL TESTING

	BENT #1	BENT #2	BENT #3	BENT #4
Pile Size, Type & Grade	12x53 HP, Gr.50	12x53 HP, Gr.50	12x53 HP, Gr.50	12x53 HP, Gr.50
Design Load	65 kip	65 kip	65 kip	65 kip
Factor of Safety	2.5	2.5	2.5	2.5
Downdrag Loads	N/A	N/A	N/A	N/A
Downdrag Friction	N/A	N/A	N/A	N/A
Scour Zone Friction	N/A	41 kip	41 kip	N/A
Ultimate Pile Load	163 kip	204 kip	204 kip	163 kip
Estimated Pile Tip Elevation (Driven to Ulitmate Pile Load)	880.0	862.0	862.0	880.0
Minimum Pile Tip Elevation	870.0	875.0	875.0	869.0
Driving Resistance to Minimum Pile Tip	205 kip	N/A	N/A	205 kip
Testing Method	* INDOT Standard Specification 701.05(a)			

* Restrike of Piles Shall be After a Waiting Period of 72 Hours After Initial Drive.

PLAN VIEW

EARTH EXPLORATION

LOG OF TEST BORING

Project: Six Points Road over Prairie Creek
Location: Hamilton County, IN
Client: Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. B-1
Elevation 911
Datum USC & GS
EEI Proj. No. CJ175484
Sheet 1 of 3

Project No.	---	Station	54+55	Weather	---	Driller	J.W.
Struct. No.	Hamilton 4	Offset	5 Lt. "B"	Temp.	---	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
					910	ASPHALTIC CONCRETE							
SS-1	X	100	42			SANDY LOAM, dense, moist, brown (fill)							
SS-2	X	80	6				2¼			16.7			
				5	905	CLAY LOAM, very stiff, moist, brown							
SS-3	X	80	9				3¼	2.34	128.4	11.9			
SS-4	X	100	11				4¼			10.2			
				10	900								
SS-5	X	100	12			LOAM, hard, moist, gray, A-4(1), pH = 8.0	4½			9.4			
SS-6	X	80	11				4½			10.9	19	13	6
				15	895								
SS-7	X	80	22			SANDY LOAM, stiff, moist, gray	1¾			16.7			
SS-8	X	100	58			SANDY LOAM, very dense, wet, brown							
				20	890								
SS-9	X	0	50/.3				---			---			
				25	885	LOAM, hard, moist, brown							
SS-10	X	70	50/.3				>4½			10.6			
				30		Continued Next Page							

WATER LEVEL OBSERVATIONS

Depth ft	While Drilling	Upon Completion	After Drilling
To Water	21	11	BF
To Cave-in		34	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start 4/24/18 End 4/24/18 Rig CME 75
Drilling Method 3¼" I.D. HSA Truck
Remarks Backfilled with auger cuttings.

EARTH EXPLORATION

LOG OF TEST BORING

Project: Six Points Road over Prairie Creek
Location: Hamilton County, IN
Client: Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. B-1
Elevation 911
Datum USC & GS
EEI Proj. No. CJ175484
Sheet 2 of 3

Project No.	---	Station	54+55	Weather	---	Driller	J.W.
Struct. No.	Hamilton 4	Offset	5 Lt. "B"	Temp.	---	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
					880	LOAM, hard, moist, brown							
SS-11	X	40	50/.3*				2?			11.9			
				35	875	CLAY LOAM, stiff to very stiff, moist, brown							
SS-12	X	30	35				1½			12.1			
				40	870								
SS-13	X	90	16				1½			15.0			
				45	865	SANDY LOAM, stiff, moist, brown							
SS-14	X	60	50/.4				>4½			5.2			
				50	860								
SS-15	X	80	50/.4				>4½			8.0			
				55	855	LOAM, stiff to hard, moist, brown, with cobbles near 49 ft							
SS-16	X	10	50/.3*				---			13.1			
				60	850								
						Continued Next Page							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

EARTH EXPLORATION

LOG OF TEST BORING

Project: Six Points Road over Prairie Creek
Location: Hamilton County, IN
Client: Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. B-1
Elevation 911
Datum USC & GS
EEI Proj. No. CJ175484
Sheet 3 of 3

Project No.	---	Station	54+55	Weather	---	Driller	J.W.
Struct. No.	Hamilton 4	Offset	5 Lt. "B"	Temp.	---	Inspector	---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
SS-17	X	100	94/1		845		3?			7.4			
SS-18	X	100	76	70	840		4			7.4			
SS-19	X	100	74	75	835	LOAM, stiff to hard, moist, brown, with cobbles near 49 ft	>4½		125.7	12.4			
SS-20	X	100	73	80	830		>4½			5.9			
SS-21	X	100	72	85	825		>4½	6.94	125.4	12.1			
SS-22	X	100	78	90			>4½			11.4			
						End of Boring at 90 ft<<C>>							
						*Seating increment							

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LEGEND OF SAMPLE TYPES

SS-Split Spoon
RC-Rock Core
ST-Shelby Tube

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

SOIL BORINGS

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'	
SURVEY BOOK	SHEET
	11 of 34
CONTRACT	PROJECT
	PB-17-0002

Date: Nov 16, 2018, 1:21pm User Name: Tracy
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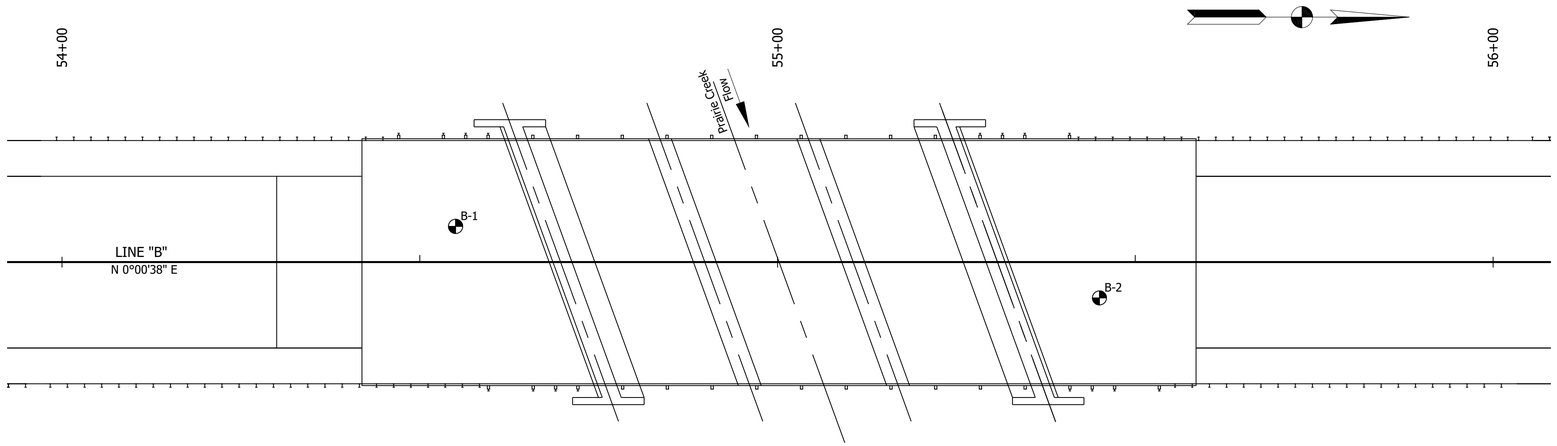

PLAN VIEW

EARTH EXPLORATION

LOG OF TEST BORING

Project Six Points Road over Prairie Creek
Location Hamilton County, IN
Client Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. B-2
Elevation 908
Datum USC & GS
EEI Proj. No. CJ175484
Sheet 1 of 3

Project No. --- Station 55+45 Weather --- Driller J.W.
Struct. No. Hamilton 4 Offset 5 Rt. "B" Temp. --- Inspector ---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
				0	910	ASPHALTIC CONCRETE							
SS-1	X	100	24			SANDY LOAM, very stiff, moist, brown (fill)							
SS-2	X	70	8	5	905		3½			17.6			
SS-3	X	100	5			CLAY LOAM, medium stiff to very stiff, moist, brown, with clay seam near 6½ ft	½			22.8			
SS-4	X	70	7	10	900		2?			10.9			
SS-5	X	80	7				2?	2.87	126.8	12.4			
SS-6	X	70	26	15	895	SANDY LOAM, very stiff, moist, brown	2½			18.8			
SS-7	X	100	39				>4½			9.3			
SS-8	X	100	28	20	890		2½			12.6	20	13	7
SS-9	X	70	29	25	885	CLAY LOAM, very stiff to hard, moist, brown, with silty clay loam seam near 18½ ft, A-4(2), pH = 8.4	>4½		132.7	9.7			
SS-10	X	100	20	30	880		>4½			10.6			

Continued Next Page

WATER LEVEL OBSERVATIONS

	Depth ft	While Drilling	Upon Completion	After Drilling
To Water		15	7	BF
To Cave-in			31	

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

GENERAL NOTES

Start 4/23/18 End 4/23/18 Rig CME 75
Drilling Method 3¼" I.D. HSA Truck
Remarks Backfilled with auger cuttings.

EARTH EXPLORATION

LOG OF TEST BORING

Project Six Points Road over Prairie Creek
Location Hamilton County, IN
Client Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
317-273-1690 / 317-273-2250 (Fax)

Boring No. B-2
Elevation 908
Datum USC & GS
EEI Proj. No. CJ175484
Sheet 2 of 3

Project No. --- Station 55+45 Weather --- Driller J.W.
Struct. No. Hamilton 4 Offset 5 Rt. "B" Temp. --- Inspector ---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
				35	875	CLAY LOAM, very stiff to hard, moist, brown, with silty clay loam seam near 18½ ft, A-4(2), pH = 8.4							
SS-11	X	100	0			SAND, very loose, wet, brown							
SS-12	X	80	19	40	870		2?			20.8			
						CLAY LOAM, very stiff, moist, black, with trace organic matter, LOI = 3.8 percent							
SS-13	X	80	7	45	865	SANDY LOAM, very stiff, moist, brown	2?			14.4			
SS-14	X	100	88/0.9	50	860		>4½			5.7			
SS-15	X	70	50/.5	55	855	LOAM, very stiff to hard, moist, brown, with clay loam seam near 73½ ft	>4½			5.7			
SS-16	X	100	92/1	60	850		>4½			12.3			
				65	845								

Continued Next Page

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EARTH EXPLORATION

LOG OF TEST BORING

Project Six Points Road over Prairie Creek
Location Hamilton County, IN
Client Lochmueller Group, Inc.
7770 West New York Street – Indianapolis, Indiana 46214
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Boring No. B-2
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Datum USC & GS
EEI Proj. No. CJ175484
Sheet 3 of 3

Project No. --- Station 55+45 Weather --- Driller J.W.
Struct. No. Hamilton 4 Offset 5 Rt. "B" Temp. --- Inspector ---

SAMPLE No.	Type	Rec %	N Value	Depth ft	Elev	DESCRIPTION/CLASSIFICATION and REMARKS	q_p tsf	q_u tsf	γ_t pcf	W %	LL %	PL %	PI %
SS-17	X	90	96/0.8	65	840		>4½		132.0	9.4			
SS-18	X	100	70	70	835		>4½			8.1			
SS-19	X	100	86	75	830	LOAM, very stiff to hard, moist, brown, with clay loam seam near 73½ ft	3½			10.7			
SS-20	X	0	93	80	825		---			---			
SS-21	X	100	74	85	820		>4½			9.7			
SS-22	X	100	84	90	815		3¼			8.8			

End of Boring at 90 ft<<C>>

*N-value influenced by heaving sand

The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.

LEGEND OF SAMPLE TYPES

SS-Split Spoon
RC-Rock Core
ST-Shelby Tube

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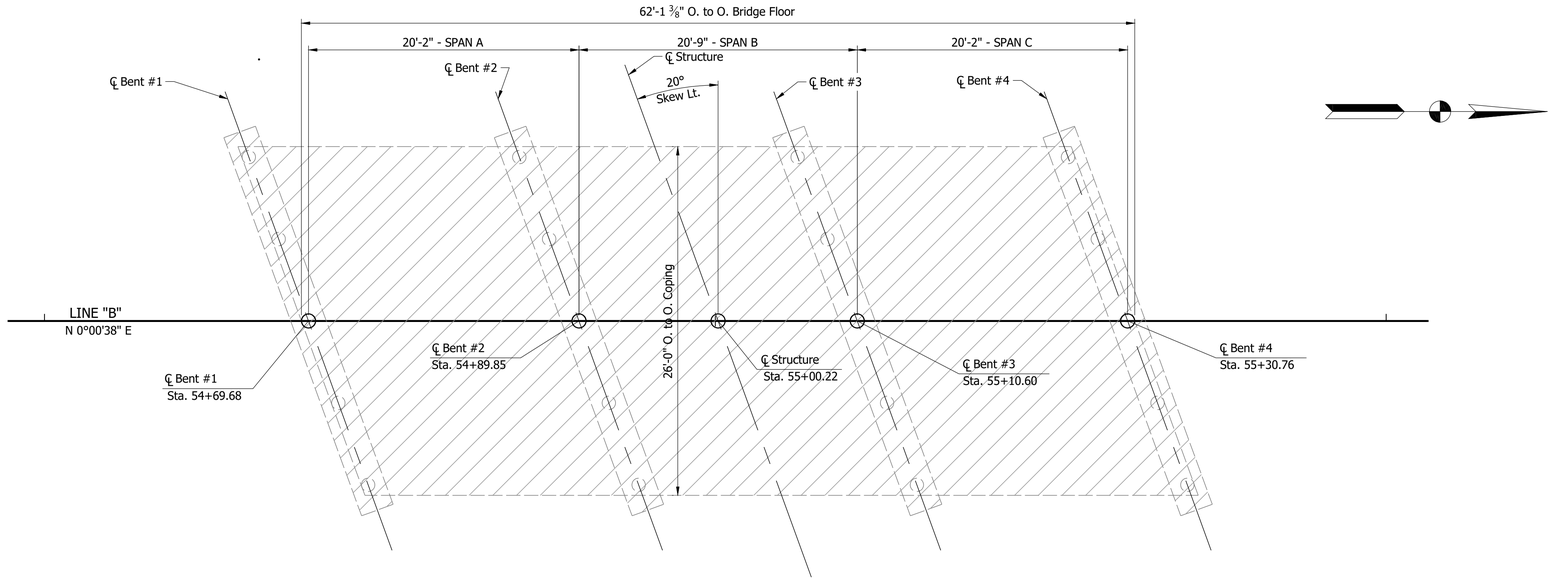
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

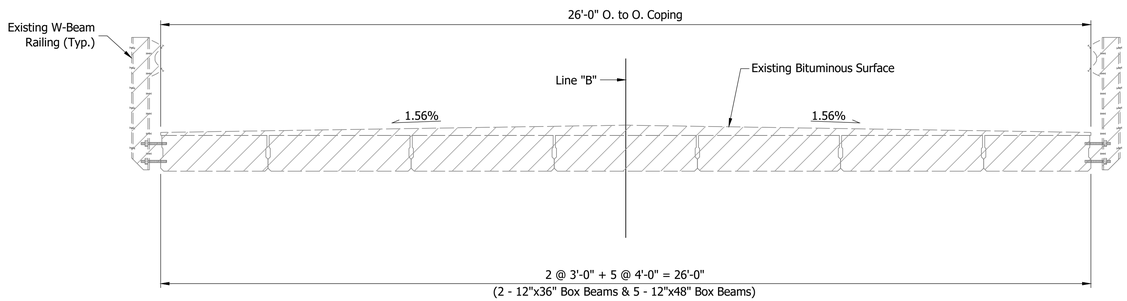
SOIL BORINGS

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'	
SURVEY BOOK	SHEET
	12 of 34
CONTRACT	PROJECT
	PB-17-0002

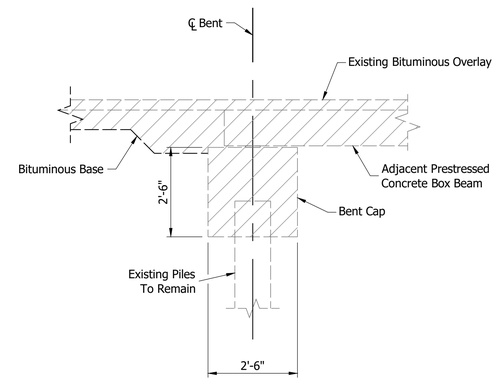
Date: Nov 16, 2018, 1:21pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\soil_borings.dwg



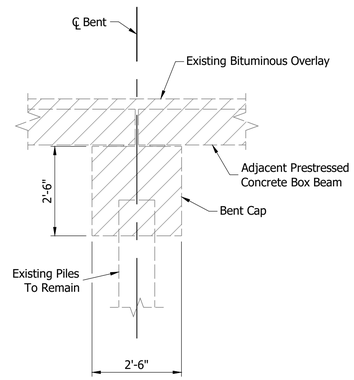
PLAN VIEW
SCALE: 3/16" = 1'-0"



EXISTING BRIDGE TYPICAL SECTION
SCALE: 1/2" = 1'-0"



EXISTING END BENT #1 REMOVAL
(END BENT #4 SIMILAR)
SCALE: 1/2" = 1'-0"



EXISTING INTERIOR BENT #2 REMOVAL
(INTERIOR BENT #3 SIMILAR)
SCALE: 1/2" = 1'-0"

DENOTES LIMITS OF REMOVAL

SIX POINTS RD. OVER PRAIRIE CREEK
CONTINUOUS ADJACENT PRESTRESSED CONCRETE BOX BEAM BRIDGE

3 SPANS @ 20'-2", 20'-9" & 20'-2"
CLEAR ROADWAY: 34'-0"
SKEW: 20° LT.

HAMILTON COUNTY, INDIANA

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

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DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

REMOVAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
	13 of 34
CONTRACT	PROJECT
	PB-17-0002

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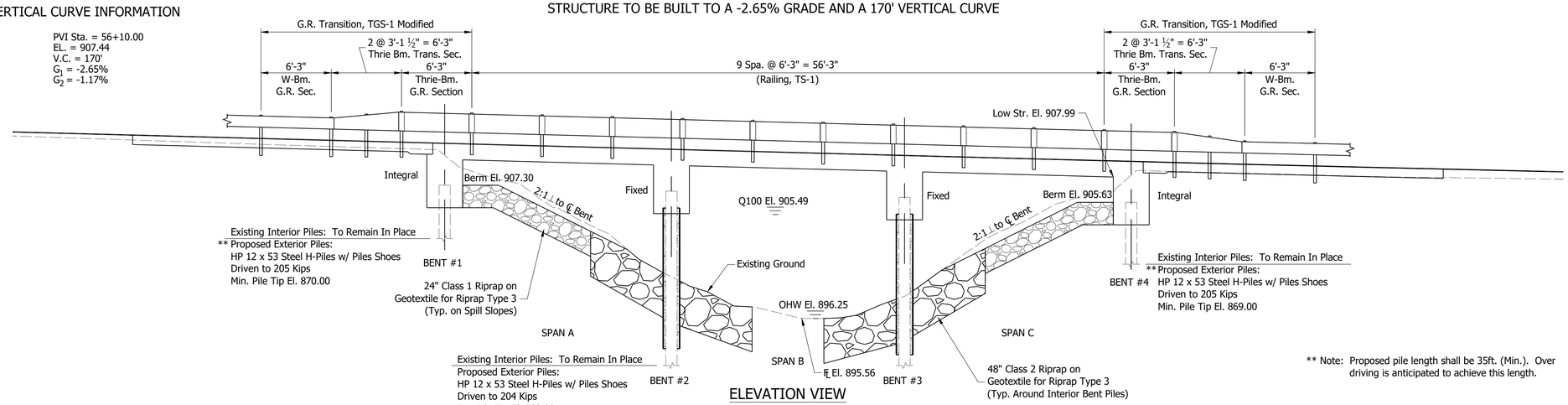
VERTICAL CURVE INFORMATION

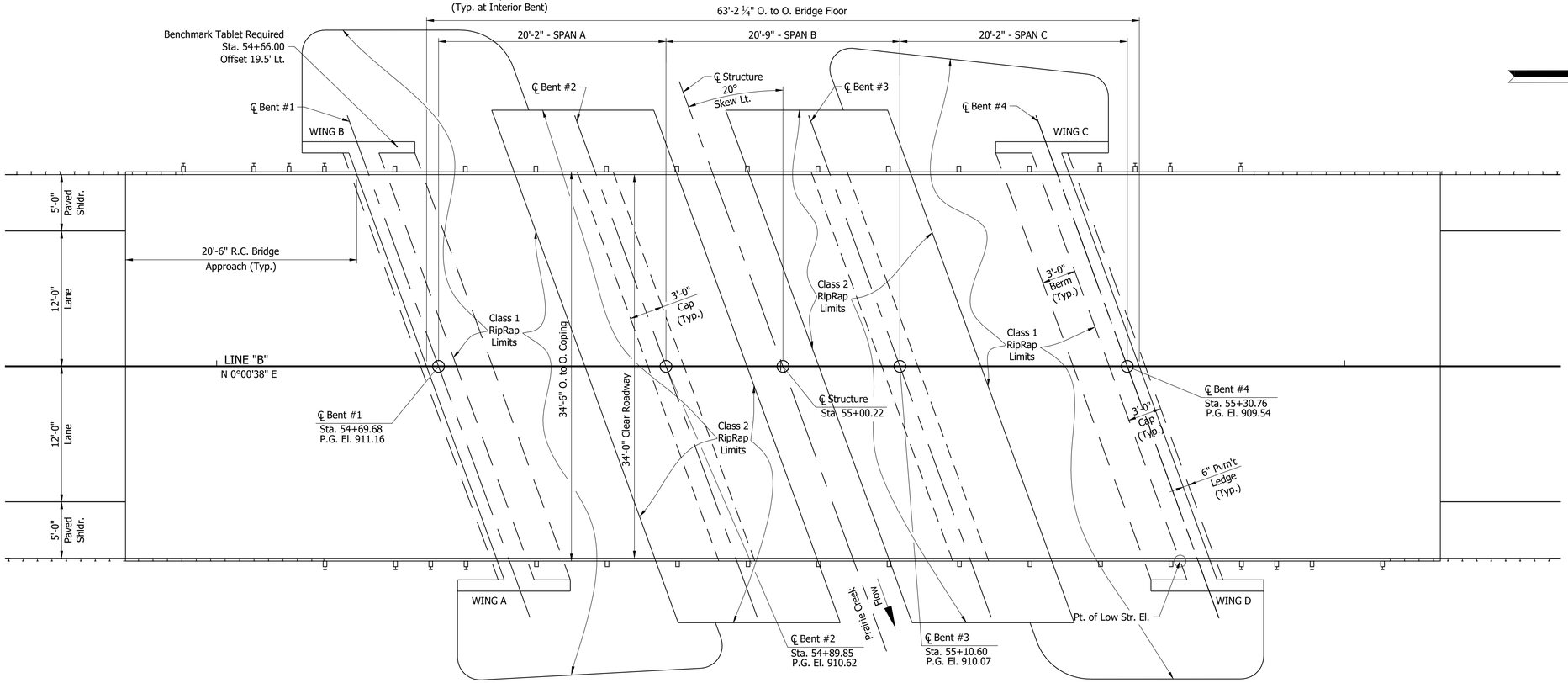
PVI Sta. = 56+10.00
EL. = 907.44
V.C. = 170'
G_1 = -2.65%
G_2 = -1.17%

STRUCTURE TO BE BUILT TO A -2.65% GRADE AND A 170' VERTICAL CURVE



ELEVATION VIEW

** Note: Proposed pile length shall be 35ft. (Min.). Over driving is anticipated to achieve this length.



PLAN VIEW

SIX POINTS RD. OVER PRAIRIE CREEK

CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE

3 SPANS @ 20'-2", 20'-9" & 20'-2"
CLEAR ROADWAY: 34'-0"
SKEW: 20° LT.

HAMILTON COUNTY, INDIANA

BETH A. CARTER
REGISTERED
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HAMILTON COUNTY
HIGHWAY DEPARTMENT

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	
SURVEY BOOK	SHEET
	14 of 34
CONTRACT	PROJECT
	PB-17-0002

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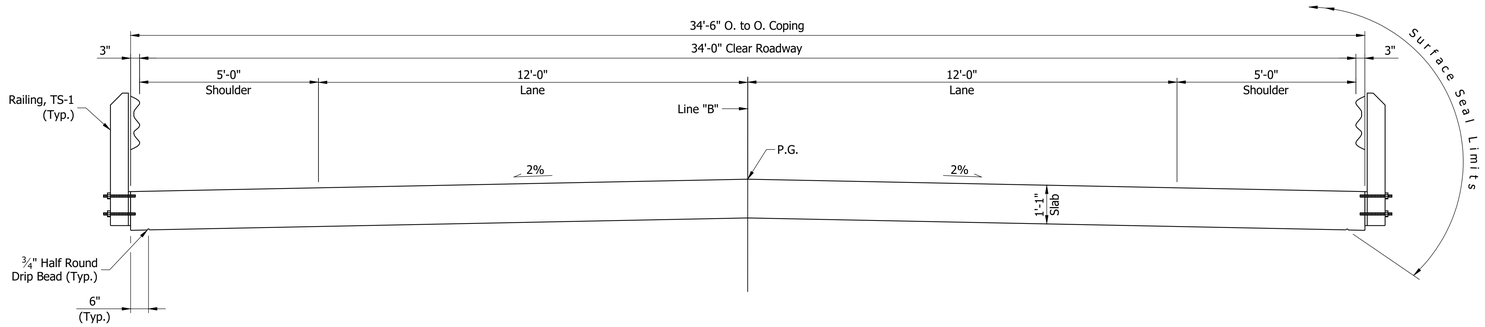

BRIDGE TYPICAL SECTION

TYPICAL ROAD CROSS SECTION

See Sheet No. 3

DESIGN STRESSES

Class C Concrete: f'c= 4,000 psi

Reinforcing Steel (Grade 60): fy= 60,000 psi

DESIGN DATA

Live Load: Originally designed for H20-44 loading, in accordance with 1973 AASHTO Specifications.

Superstructure designed for HL-93 loading, in accordance with the AASHTO LRFD Bridge Design Specifications, Eighth Edition, 2017.

Substructure and substructure foundation designed for HS20 loading, in accordance with the AASHTO Standard Specifications for Highway Bridges, Seventeenth Edition, 2002.

Dead Load: Actual Weight Plus 35 lbs/ft^2 For Future Wearing Surface.

Bridge Floor: Designed with a 1'-0 ½" Structural Depth Plus 1/2" Sacrificial Wearing Surface.

GENERAL NOTES

1. Reinforcing Steel Covering Shall Be 2" Unless Noted.
2. Chamfer Exposed Edges 3/4" Unless Noted.
3. Concrete Requirements: Concrete in Substructure to be Class "C". Concrete in Superstructure to be Class "C".
4. Plans for the Existing Structrure are on file at the Hamilton County Highway Department as Bridge File Hamilton 74-4.
5. Surface Seal Exposed Faces of Top of Deck & Coping, Underside of Deck from Coping to Drip Bead, Approach Slabs and Wingwalls. Estimated Quantity = 4,490 SFT.

SIX POINTS RD. OVER PRAIRIE CREEK

CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE

3 SPANS @ 20'-2", 20'-9" & 20'-2"
CLEAR ROADWAY: 34'-0"
SKEW: 20° LT.

HAMILTON COUNTY, INDIANA

BETH A. CARTER
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HAMILTON COUNTY
HIGHWAY DEPARTMENT

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1/2" = 1'-0"	
SURVEY BOOK	SHEET
	15 of 34
CONTRACT	PROJECT
	PB-17-0002

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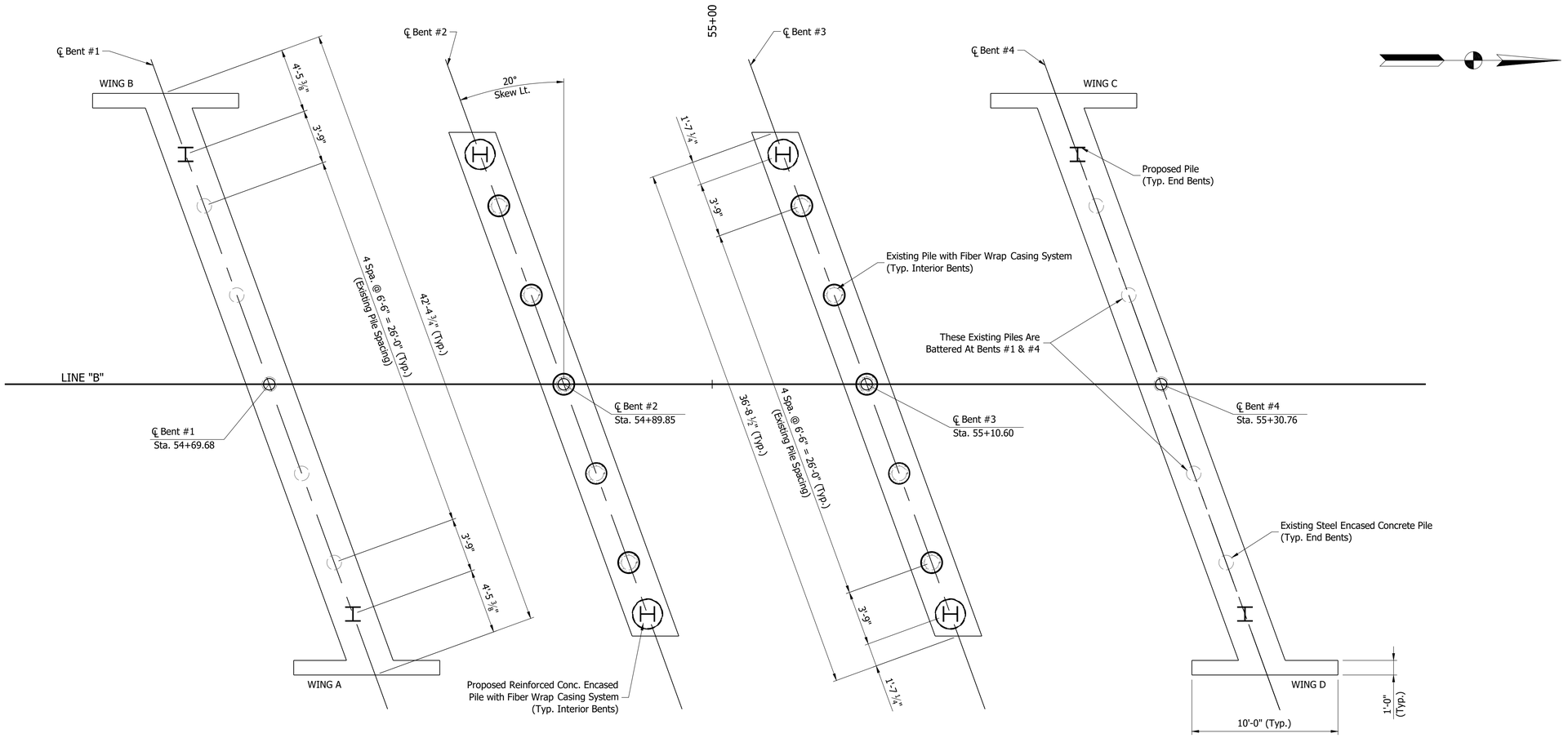

PLAN VIEW

NOTE:
Proposed piles are HP 12x53. Piles shall be driven to nominal driving resistance shown in tables on sheet 11.

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HAMILTON COUNTY
HIGHWAY DEPARTMENT

FOUNDATION LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1/4" = 1'-0"	
SURVEY BOOK	SHEET
	16 of 34
CONTRACT	PROJECT
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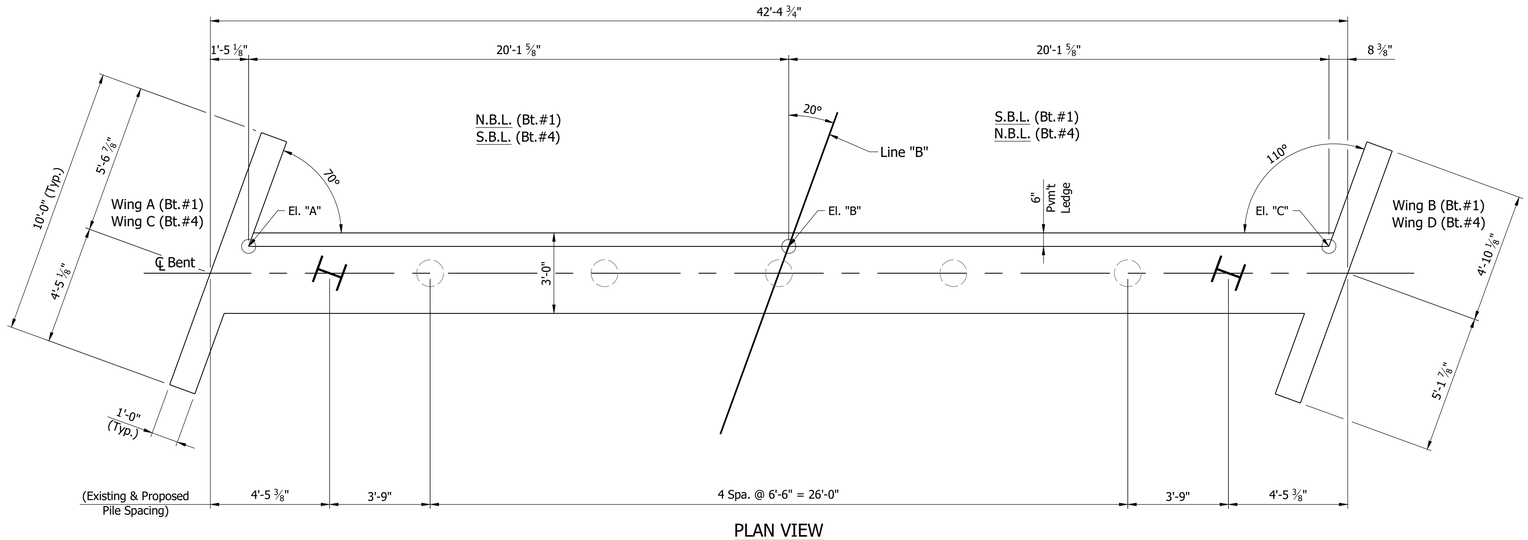
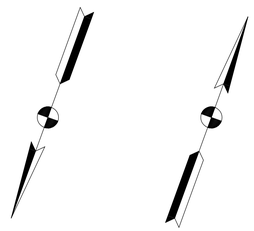
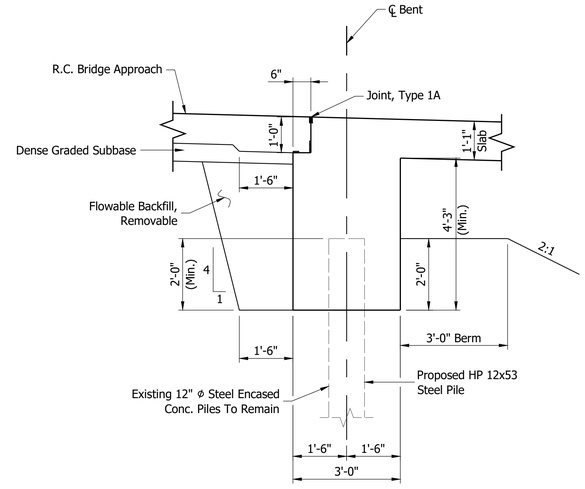


PLAN VIEW

BENT #1 SHOWN, BENT #4 SIMILAR
SCALE: 3/8" = 1'-0"

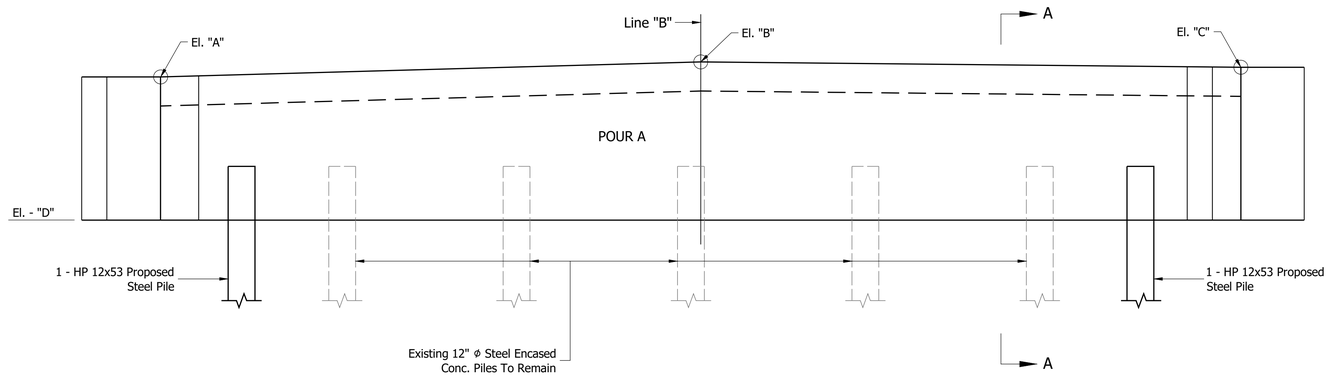


BENT #1 BENT #4



SECTION A-A

SCALE: 1/2" = 1'-0"



ELEVATION VIEW

BENT #1 SHOWN, BENT #4 SIMILAR
SCALE: 3/8" = 1'-0"

END BENT ELEVATIONS		
ELEV.	BENT #1	BENT #4
A	910.63	909.32
B	911.19	909.51
C	910.99	908.96
D	905.40	903.48

NOTE: Pile Shoes are to be used on each pile.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

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HAMILTON COUNTY
HIGHWAY DEPARTMENT

END BENT #1 OR #4 CONSTRUCTION

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
	17 of 34
CONTRACT	PROJECT
	PB-17-0002

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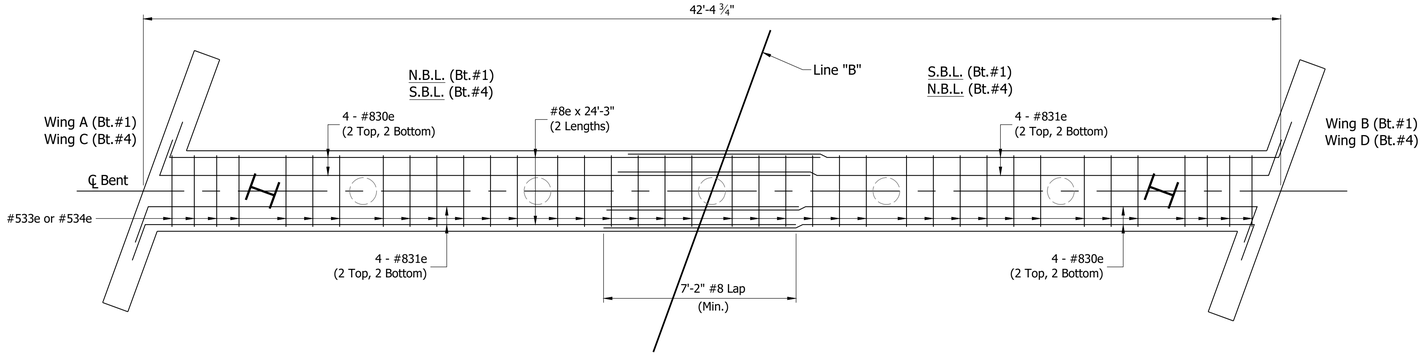
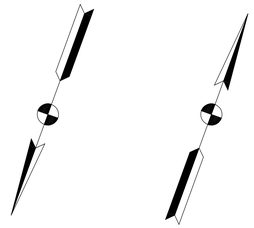
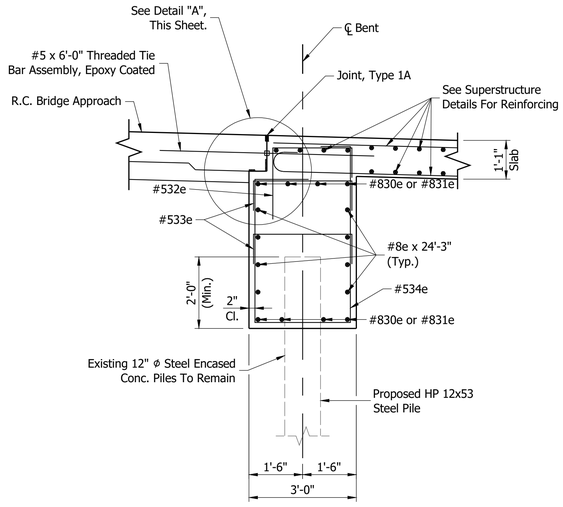


CAP PLAN VIEW

BENT #1 SHOWN, BENT #4 SIMILAR
SCALE: 3/8" = 1'-0"

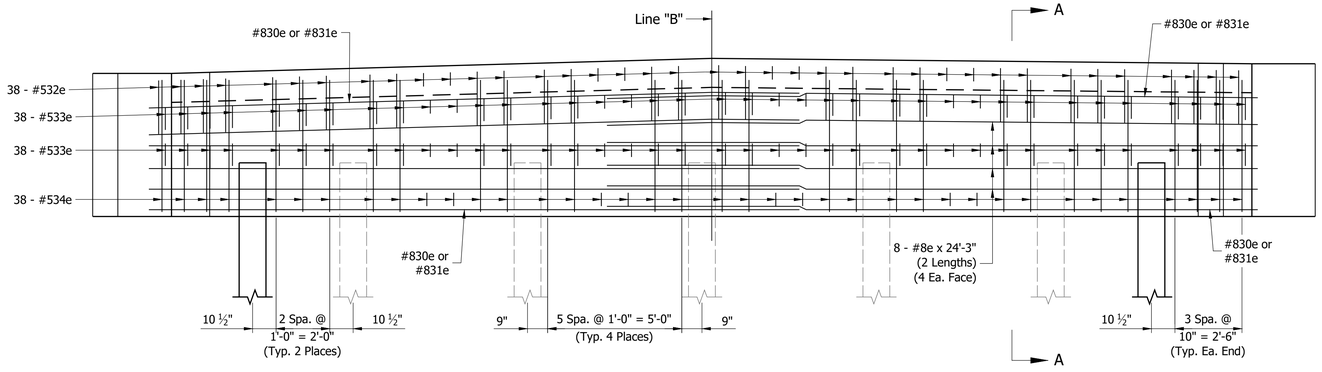


BENT #1 BENT #4



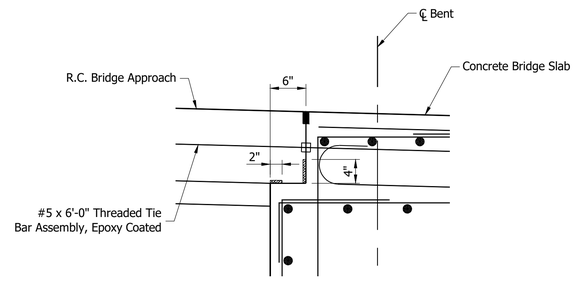
SECTION A-A

SCALE: 1/2" = 1'-0"



ELEVATION VIEW

BENT #1 SHOWN, BENT #4 SIMILAR
SCALE: 3/8" = 1'-0"



DETAIL "A"

SCALE: 1" = 1'-0"

1/2" Expanded Polystyrene

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HAMILTON COUNTY
HIGHWAY DEPARTMENT

END BENT #1 OR #4 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
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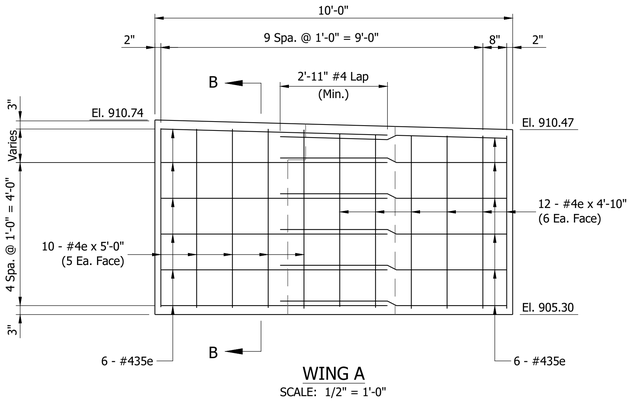
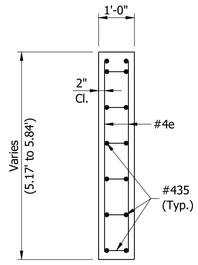
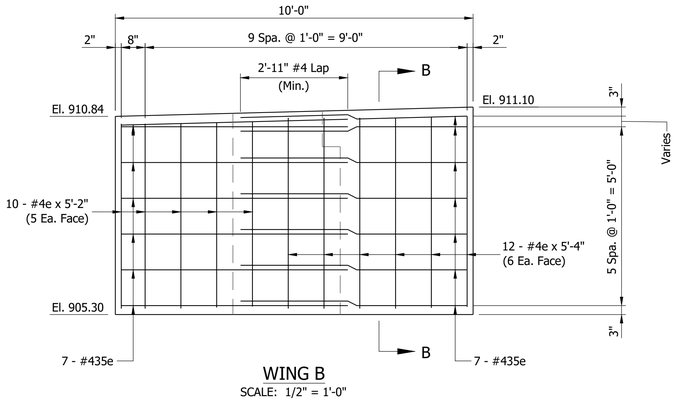


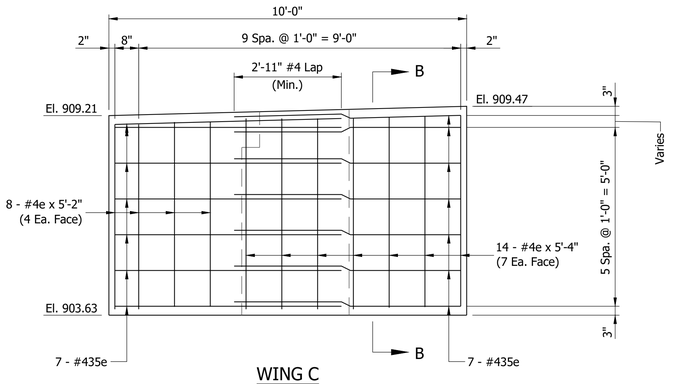
WING A
SCALE: 1/2" = 1'-0"



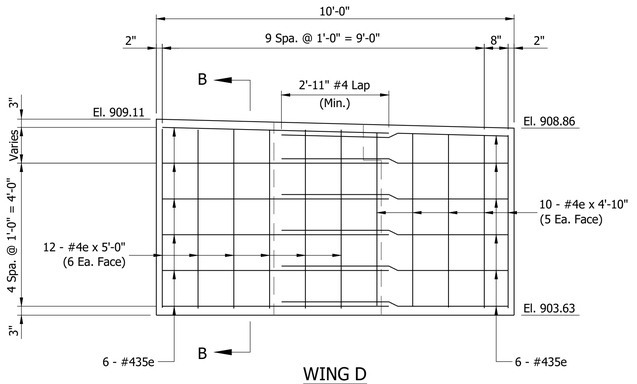
SECTION B-B
SCALE: 1/2" = 1'-0"



WING B
SCALE: 1/2" = 1'-0"



WING C
SCALE: 1/2" = 1'-0"

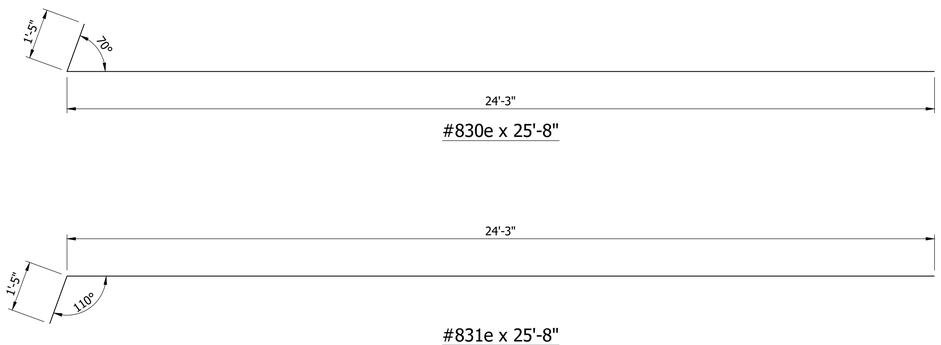


WING D
SCALE: 1/2" = 1'-0"

BILL OF MATERIALS				
BENT #1 AND BENT #4				
REINFORCING STEEL				
SIZE & MARK	NO. OF BARS BENT #1	NO. OF BARS BENT #4	LENGTH	WEIGHT (Lbs.)
EPOXY COATED REINFORCING STEEL				
#831e	8	8	25'-8"	
#830e	8	8	25'-8"	
#8e	16	16	24'-3"	
TOTAL #8e BARS:				4265
#534e	38	38	13'-11"	
#533e	76	76	4'-4"	
#532e	38	38	5'-0"	
TOTAL #5e BARS:				2186
#435e	26	26	13'-4"	
#4e	12	14	5'-4"	
#4e	10	8	5'-2"	
#4e	10	12	5'-0"	
#4e	12	10	4'-10"	
TOTAL #4e BARS:				763
TOTAL EPOXY COATED REINFORCING:				7214

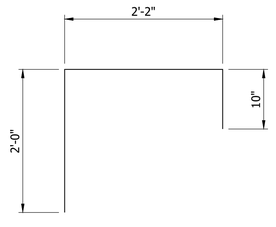
MISCELLANEOUS		
	BENT #1	BENT #4
Pile, Steel H, HP 12x53		
1 Pile @ 38 ft.	38 Lft.	---
2 Pile @ 37 ft.	---	74 Lft.
Pile Shoes, HP, 12x53	2 Ea.	2 Ea.
Test Pile, Indicator, Restrike	1 Ea.	---
Test Pile, Indicator, Production	48 Ft.	---

NOTE: Concrete Included with Superstructure Bill of Materials, See Sheet 25.

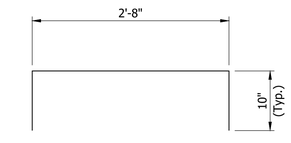


#830e x 25'-8"

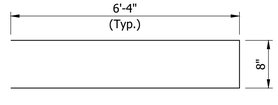
#831e x 25'-8"



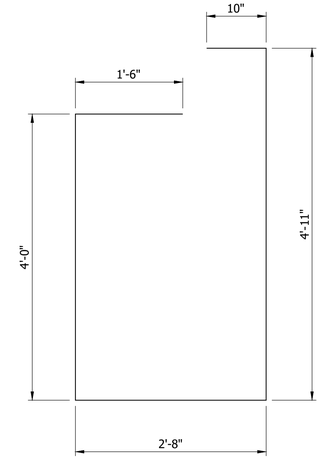
#532e x 5'-0"



#533e x 4'-4"



#435e x 13'-4"



#534e x 13'-11"

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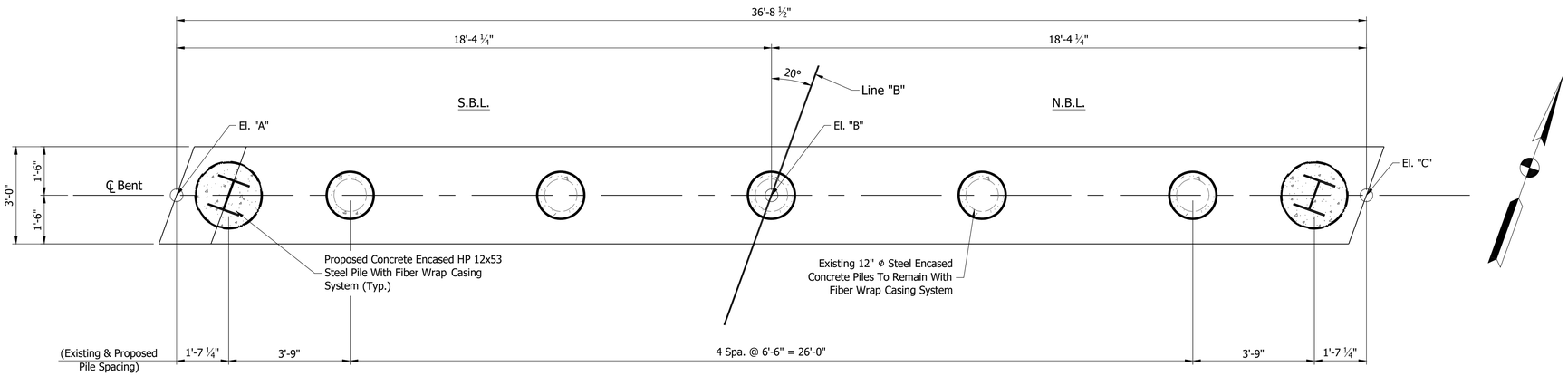
HAMILTON COUNTY
HIGHWAY DEPARTMENT

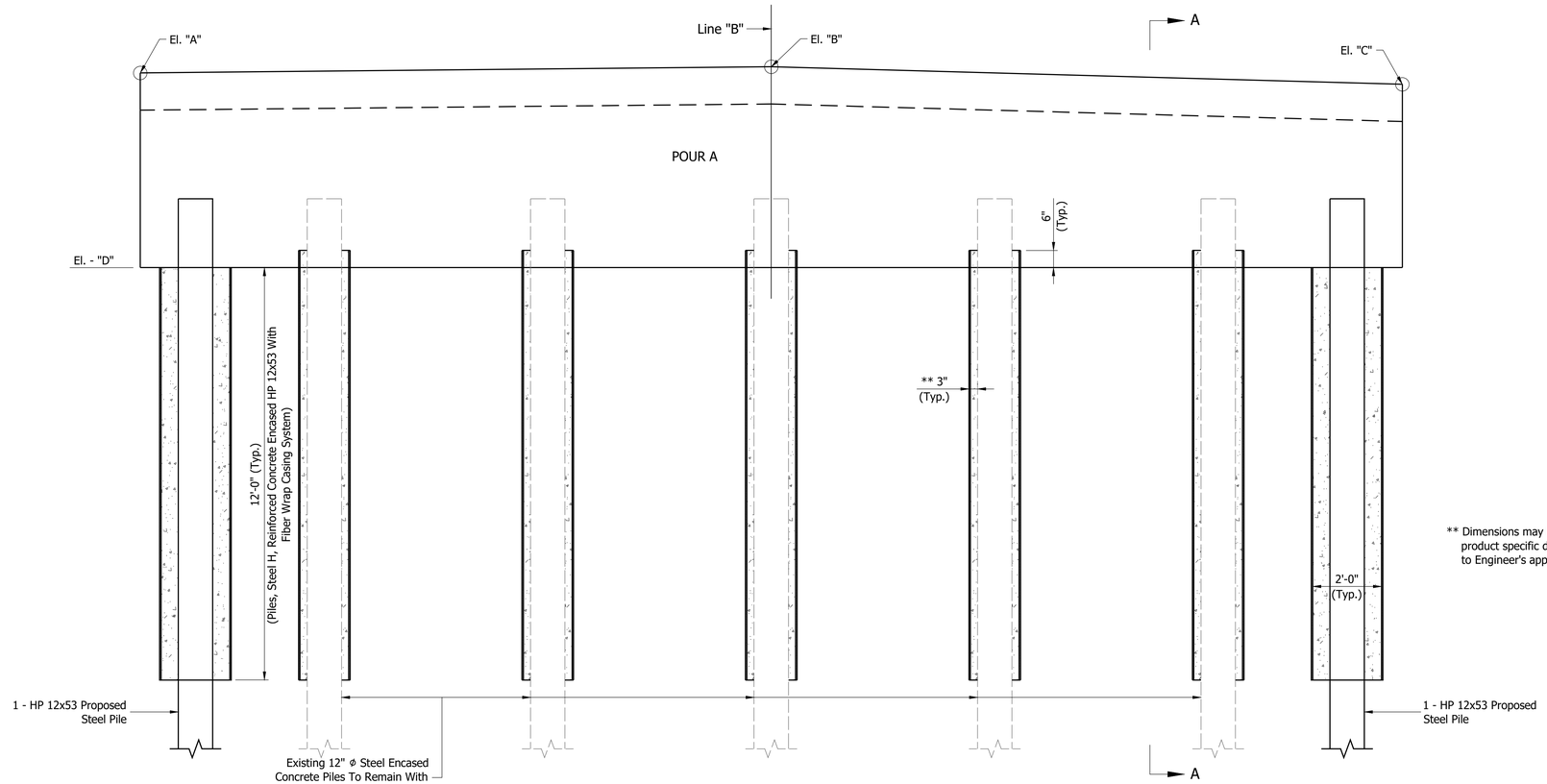
END BENT #1 OR #4 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
	19 of 34
CONTRACT	PROJECT
	PB-17-0002



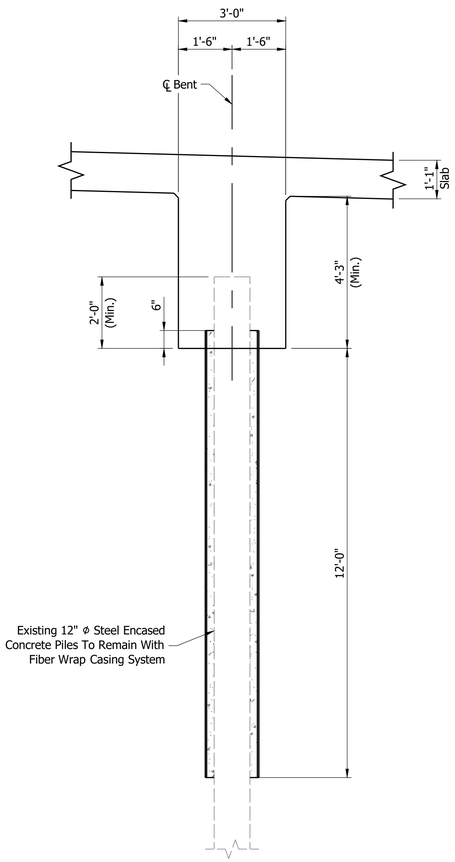
PLAN VIEW

BENT #2 SHOWN, BENT #3 SIMILAR



ELEVATION VIEW

BENT #2 SHOWN, BENT #3 SIMILAR



SECTION A-A

** Dimensions may be reduced for Manufacturer's product specific design. All changes are subject to Engineer's approval.

INTERIOR BENT ELEVATIONS		
ELEV.	BENT #2	BENT #3
A	910.45	909.90
B	910.63	910.08
C	910.12	909.57
D	904.74	904.11

NOTE: Pile Shoes are to be Used on Each Pile.

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HAMILTON COUNTY HIGHWAY DEPARTMENT

INTERIOR BENT #2 OR #3 CONSTRUCTION

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1/2" = 1'-0"	
SURVEY BOOK	SHEET
	20 of 34
CONTRACT	PROJECT
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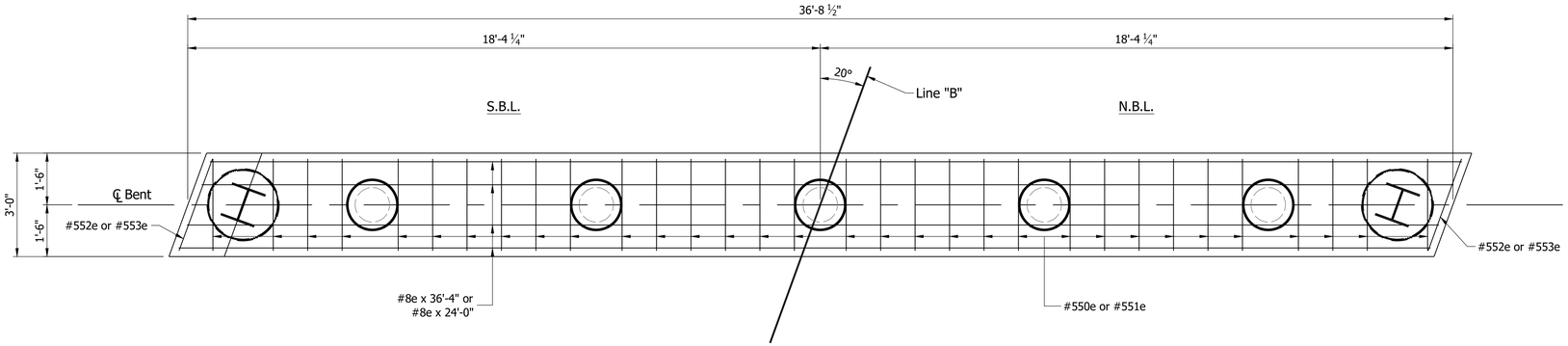
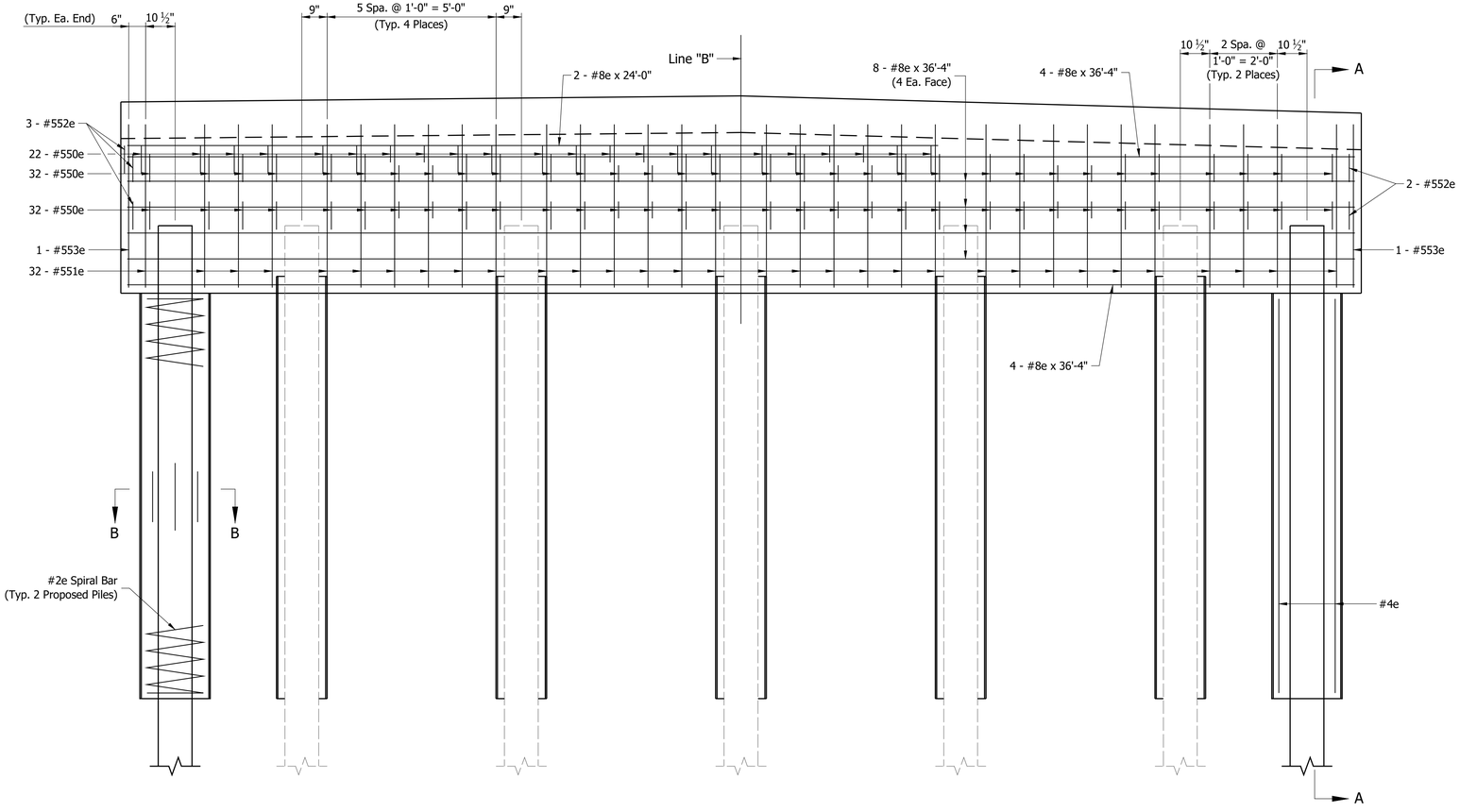


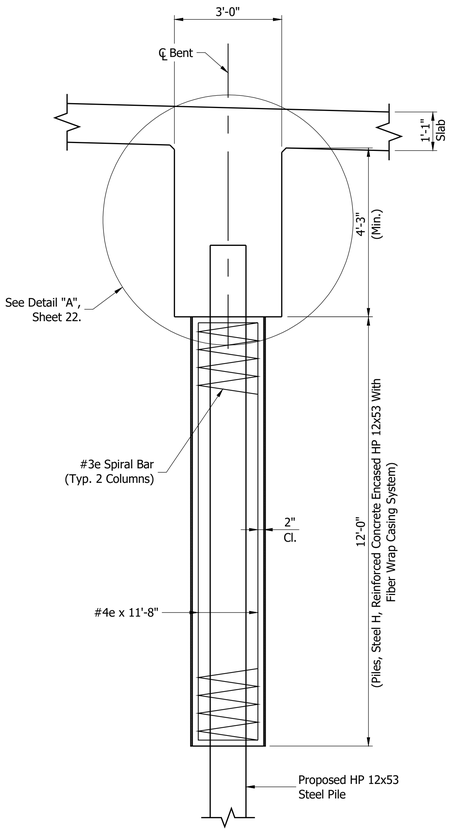
PLAN VIEW

BENT #2 SHOWN, BENT #3 SIMILAR
SCALE: 1/2" = 1'-0"



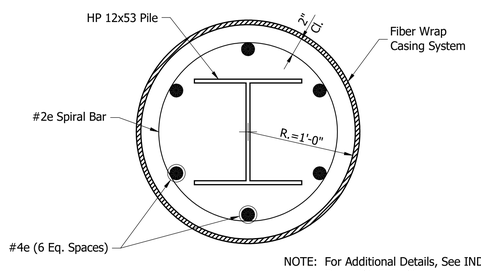
ELEVATION VIEW

BENT #2 SHOWN, BENT #3 SIMILAR
SCALE: 1/2" = 1'-0"



SECTION A-A

SCALE: 1/2" = 1'-0"



NOTE: For Additional Details, See INDOT Std. Dwg. 701-BPIL-01.

SECTION B-B

SCALE: 1 ½" = 1'-0"

BETH A. CARTER
REGISTERED
No. 10809459
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 11/7/2018 DATE

DESIGNED: BAC | DRAWN: VCH
CHECKED: ACS | CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

INTERIOR BENT #2 OR #3 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	

SURVEY BOOK	SHEET
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CONTRACT	PROJECT
	PB-17-0002

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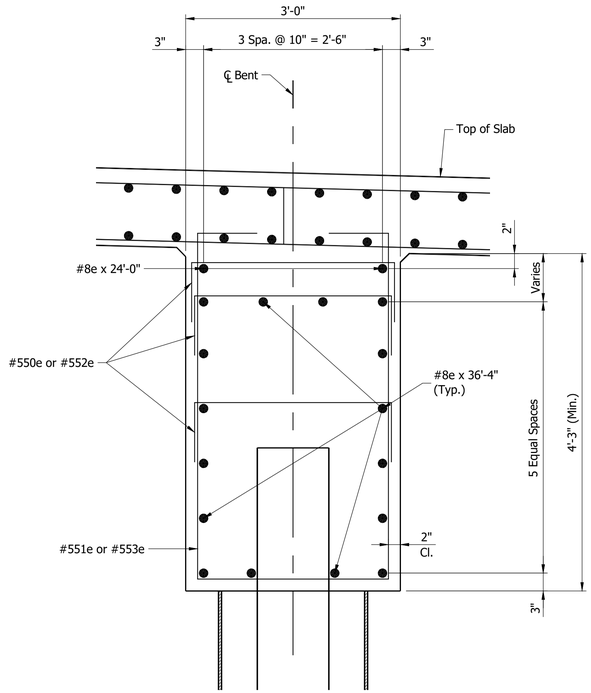
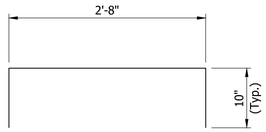
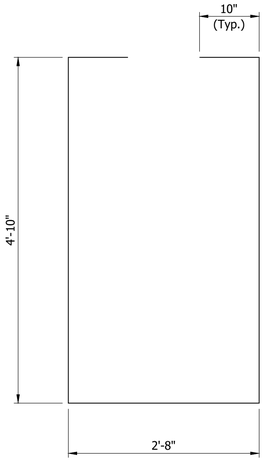


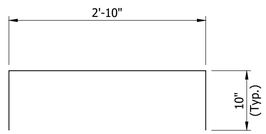
DETAIL "A"
SCALE: 1" = 1'-0"



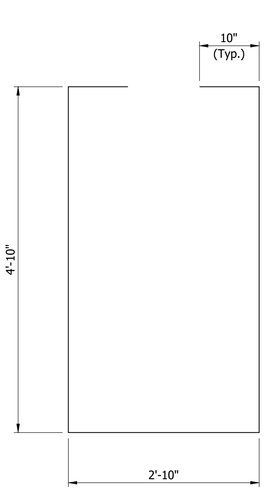
#550e x 4'-4"



#551e x 14'-0"



#552e x 4'-6"



#553e x 14'-2"

BILL OF MATERIALS

BENT #2 AND BENT #3

REINFORCING STEEL

SIZE & MARK	NO. OF BARS BENT #2	NO. OF BARS BENT #3	LENGTH	WEIGHT (Lbs.)
EPOXY COATED REINFORCING STEEL				
#8e	16	16	36'-4"	
#8e	2	2	24'-0"	
TOTAL #8e BARS:				3362
#553e	2	2	14'-2"	
#552e	5	5	4'-6"	
#551e	32	32	14'-0"	
#550e	86	86	4'-4"	
TOTAL #5e BARS:				1818
TOTAL EPOXY COATED REINFORCING:				5180

MISCELLANEOUS

	BENT #2	BENT #3
Pile, Steel H, HP 12x53		
2 Piles @ 32 ft.	64 Lft.	---
1 Piles @ 32 ft.	---	32 Lft.
Steel H Piles, Reinforced Conc. Encased, HP 12x53		
2 Piles @ 12 ft.	24 Lft.	24 Lft.
Pile Shoes, HP, 12x53	2 Ea.	2 Ea.
Test Pile, Indicator, Restrike	---	1 Ea.
Test Pile, Indicator, Production	---	42 Lft.
Fiber Wrap Casing System	452 Sft.	452 Sft.

NOTE: Concrete in Cap Included with Superstructure Bill of Materials, See Sheet 25.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

INTERIOR BENT #2 OR #3 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
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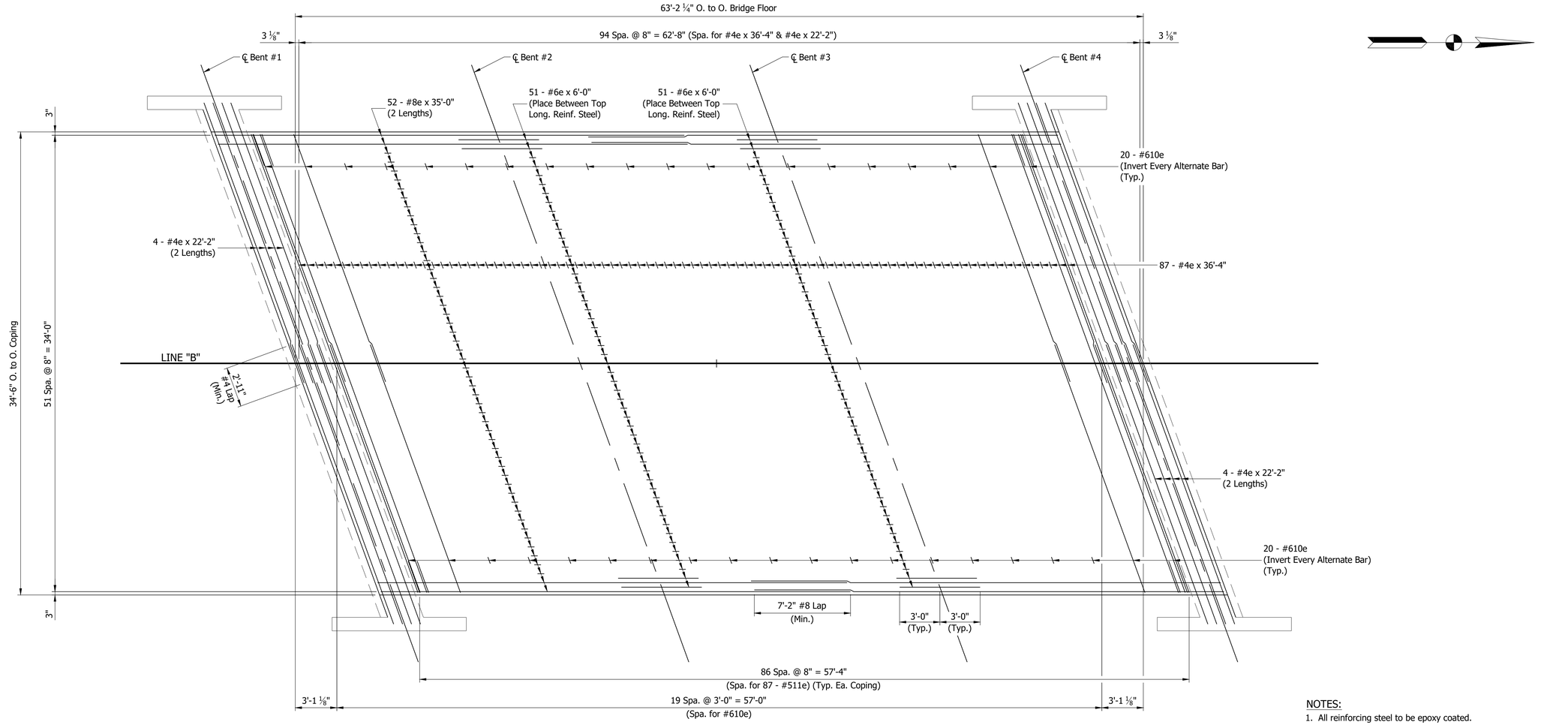
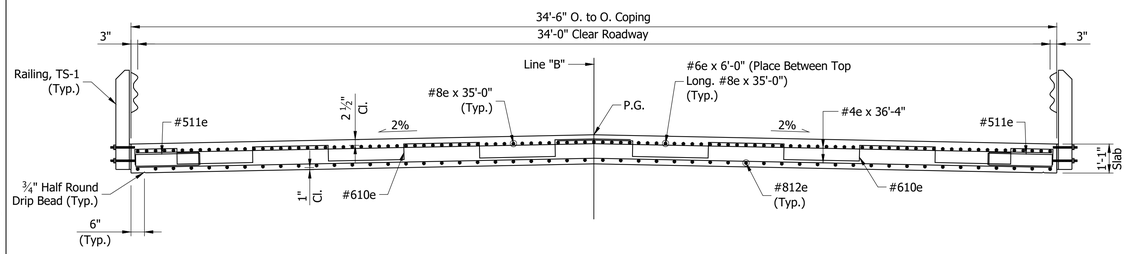


PLAN VIEW

TOP REINFORCEMENT ONLY SHOWN
SCALE: 1/4" = 1'-0"

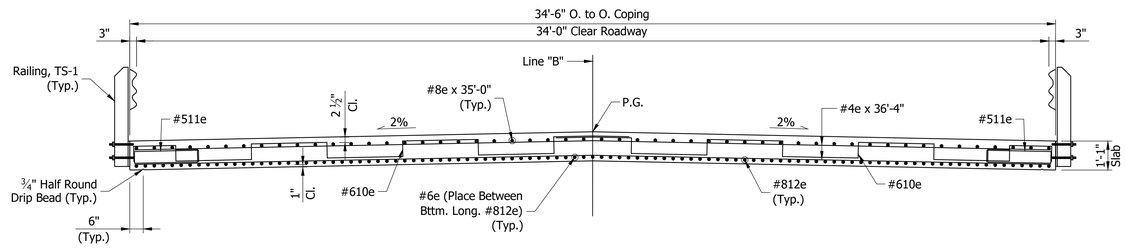
NOTES:

1. All reinforcing steel to be epoxy coated.



TYPICAL CROSS SECTION @ INTERIOR SUPPORTS

SCALE: 3/8" = 1'-0"



TYPICAL CROSS SECTION @ MIDSPAN

SCALE: 3/8" = 1'-0"

BETH A. CARTER
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No. 10809459
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DESIGNED: BAC DRAWN: VCH

CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
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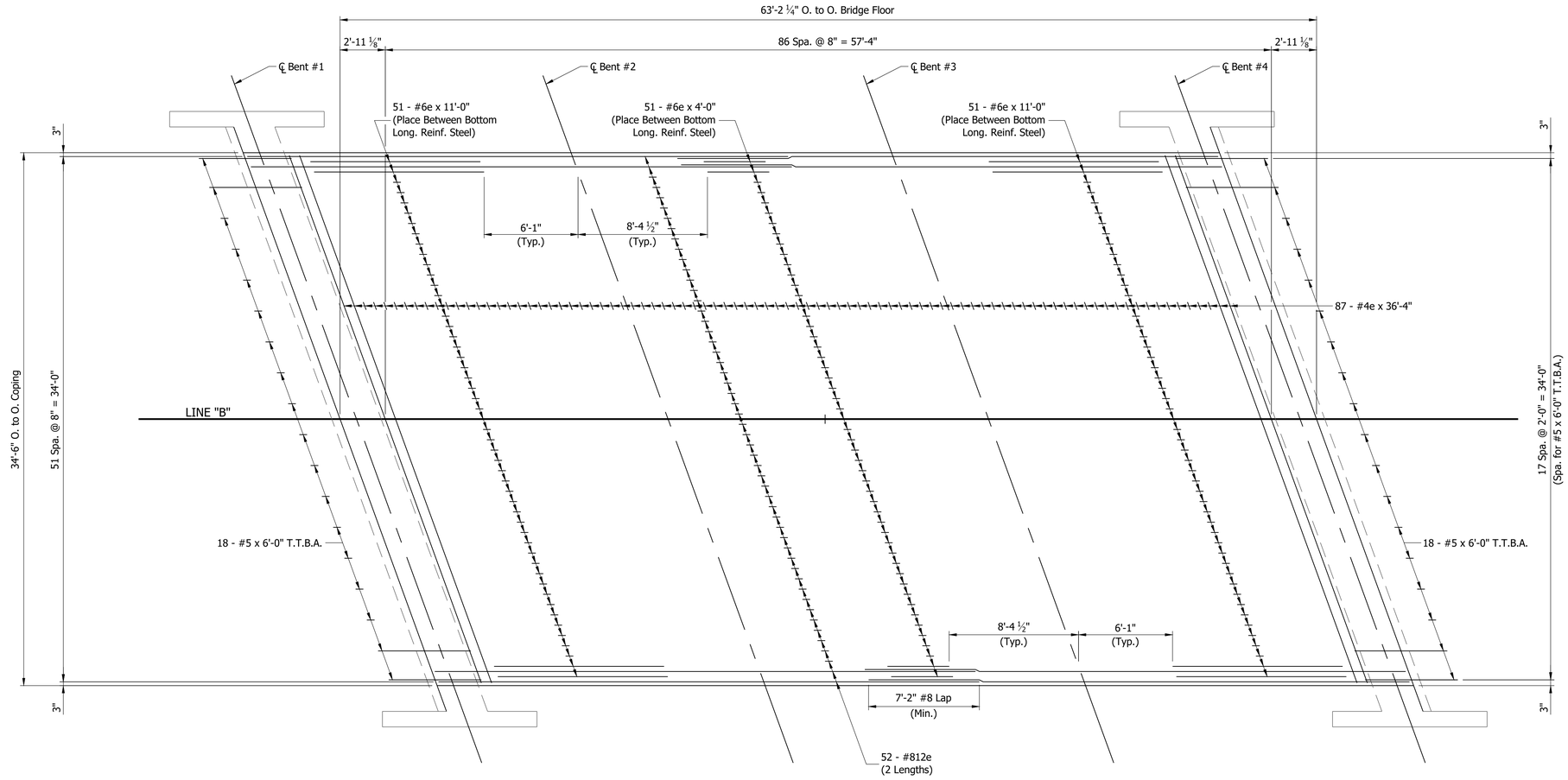
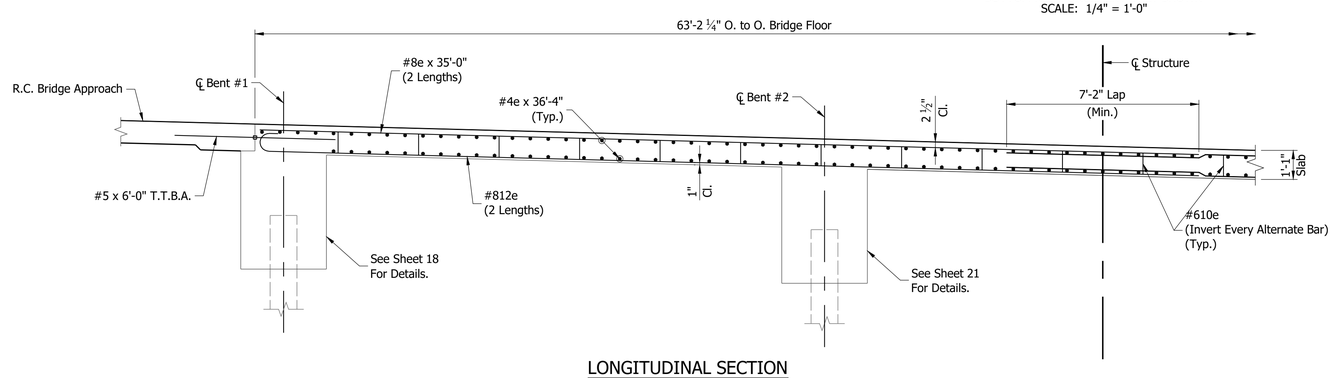


PLAN VIEW

BOTTOM REINFORCEMENT ONLY SHOWN
SCALE: 1/4" = 1'-0"



LONGITUDINAL SECTION

SCALE: 3/8" = 1'-0"

NOTES:

1. All reinforcing steel to be epoxy coated.
2. T.T.B.A. - Denotes Threaded Tie Bar Assembly, Epoxy Coated.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
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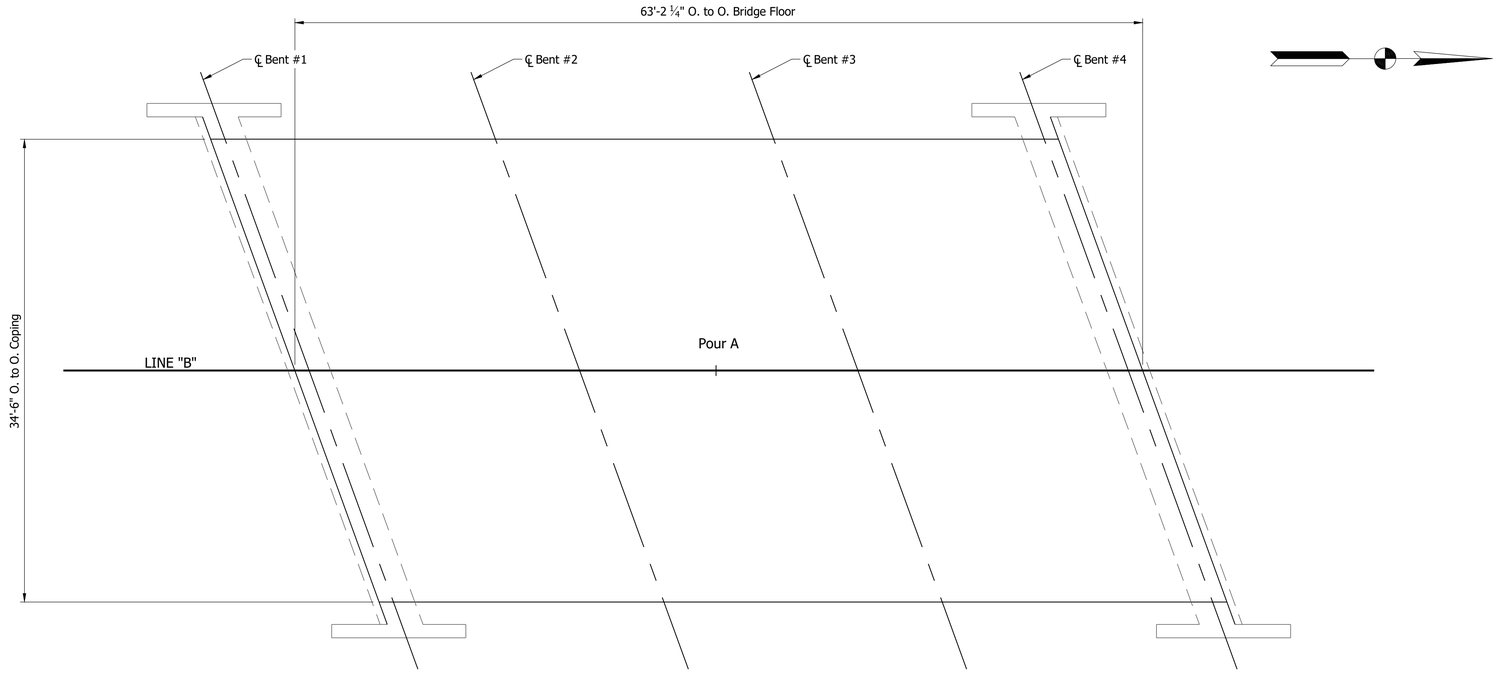
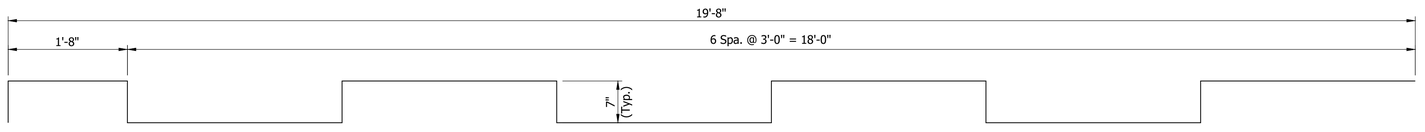
Date: Nov 16, 2018, 1:23pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\super.dwg

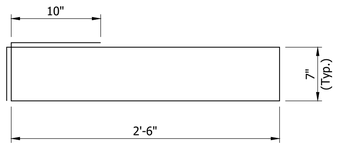


POUR DIAGRAM

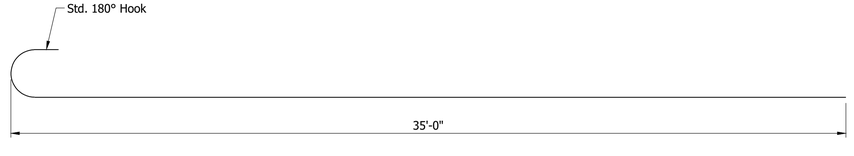
SCALE: 3/16" = 1'-0"



#610e x 23'-9"



#511e x 7'-7"



#812e x 35'-11"

BILL OF MATERIALS

SUPERSTRUCTURE			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (lbs)
EPOXY COATED REINFORCING			
#812e	104	35'-11"	
#8e	104	35'-0"	
TOTAL #8e BARS:			19692
#610e	40	23'-9"	
#6e	102	11'-0"	
#6e	102	6'-0"	
#6e	51	4'-0"	
TOTAL #6e BARS:			4338
#511e	174	7'-7"	
TOTAL #5e BARS:			1376
#4e	174	36'-4"	
#4e	16	22'-2"	
TOTAL #4e BARS:			4460
TOTAL EPOXY COATED REINFORCING			29866
CONCRETE			
Concrete, C, Superstructure			
Pour A			175 CYS
MISCELLANEOUS			
Surface Seal			2642 SFT
Threaded Tie Bar Assembly, Epoxy Coated			
#5 x 6'-0"			36 EA.

NOTES:

1. For Reinforcing Steel Details, see INDOT Std. Dwg. 703-BRST-01.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Beth A Carter, DESIGN ENGINEER, 11/7/2018 DATE

DESIGNED: BAC | DRAWN: VCH

CHECKED: ACS | CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
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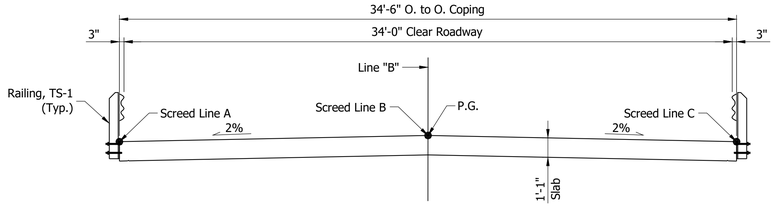
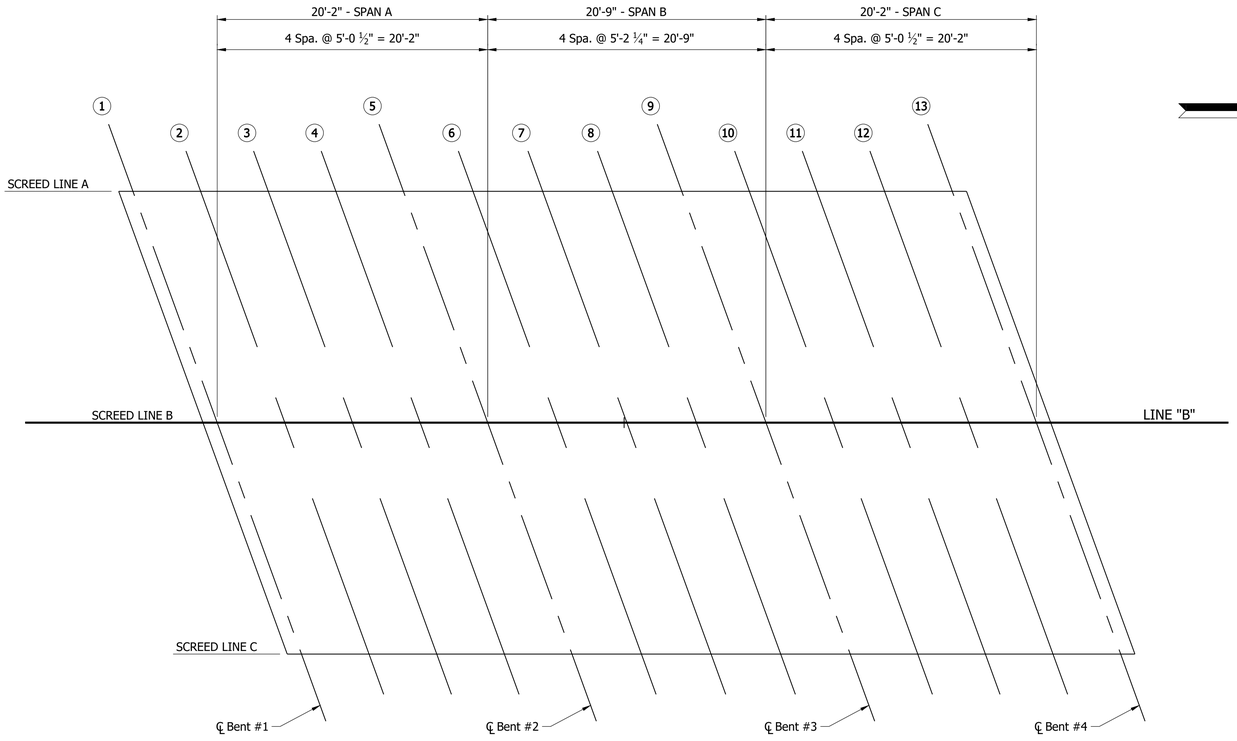
File: S:_2017\217-0030\Bridge\CAD\Plans\super.dwg

TABLE OF SCREED ELEVATIONS

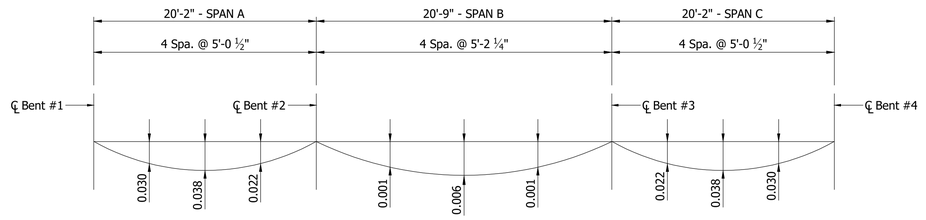
SCREED LINE			POINT:	1	2	3	4	5	6	7	8	9	10	11	12	13
	A	Lt. Coping	ELEVATION - TOP OF SCREED ADJ. FOR DL DEFL	910.980	910.850	910.715	910.580	910.445	910.310	910.170	910.035	909.895	909.765	909.630	909.495	909.360
			FALSEWORK SETTLEMENT AND DEFLECTION													
			ELEVATION - FINAL SCREED													
	B	P.G.	ELEVATION - TOP OF SCREED ADJ. FOR DL DEFL	911.160	911.025	910.895	910.760	910.625	910.485	910.350	910.210	910.075	909.940	909.810	909.675	909.540
			FALSEWORK SETTLEMENT AND DEFLECTION													
			ELEVATION - FINAL SCREED													
	C	Rt. Coping	ELEVATION - TOP OF SCREED ADJ. FOR DL DEFL	910.645	910.515	910.385	910.250	910.115	909.975	909.840	909.700	909.565	909.430	909.300	909.165	909.035
			FALSEWORK SETTLEMENT AND DEFLECTION													
			ELEVATION - FINAL SCREED													



TYPICAL CROSS SECTION
SCALE: 1/4" = 1'-0"



PLAN VIEW
SCALE: 3/16" = 1'-0"



DEAD LOAD DEFLECTION DIAGRAM

NOTE: These Deflections Include Dead Load Deflections. This Net Downward or Upward Deflection is taken into Account in the Table of Screed Elevations. Deflections are in Inches.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter DESIGN ENGINEER 11/7/2018 DATE

DESIGNED: BAC DRAWN: VCH

CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY HIGHWAY DEPARTMENT

SCREED SHEET

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
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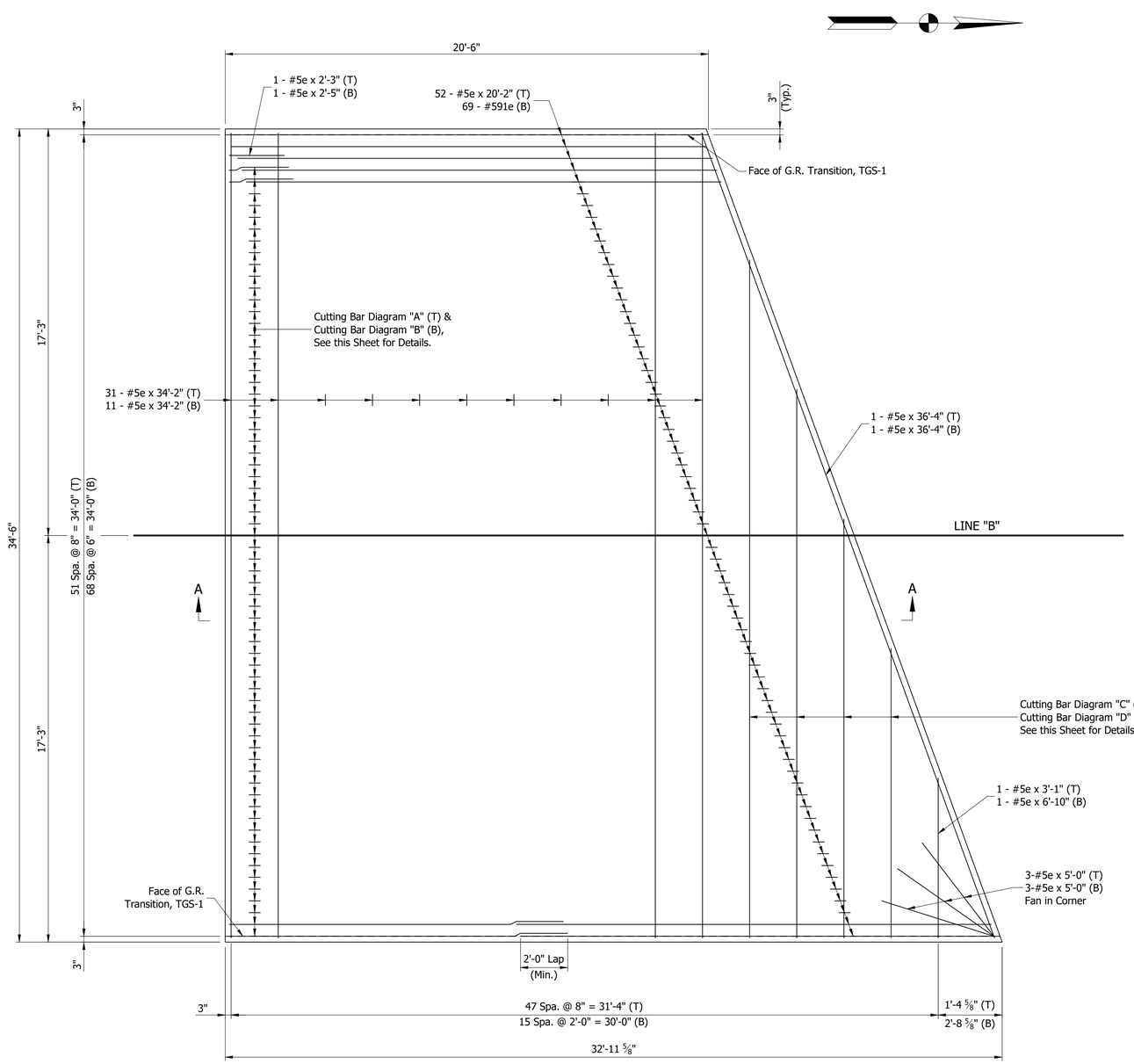
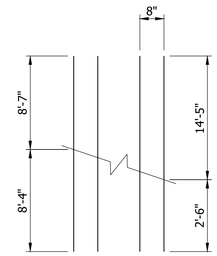


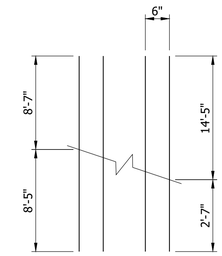
SOUTH R.C. BRIDGE APPROACH

(NORTH R.C. BRIDGE APPROACH SIMILAR)
(BOTTOM REINFORCEMENT SHOWN, UNLESS NOTED OTHERWISE)
SCALE: 3/8" = 1'-0"



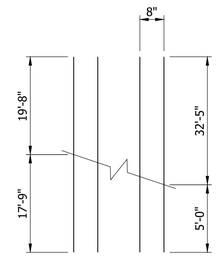
CUTTING BAR DIAGRAM "A"

25 - #5e x 16'-11" (Top)
(Varying in Length)



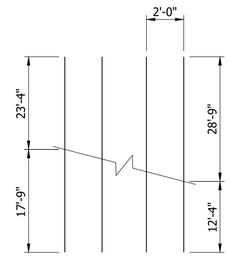
CUTTING BAR DIAGRAM "B"

33 - #5e x 17'-0" (Bottom)
(Varying in Length)



CUTTING BAR DIAGRAM "C"

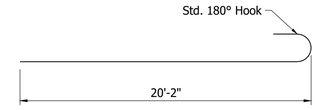
8 - #5e x 37'-5" (Top)
(Varying in Length)



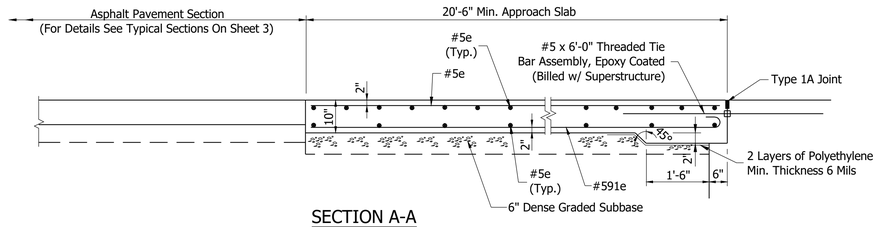
CUTTING BAR DIAGRAM "D"

2 - #5e x 41'-1" (Bottom)
(Varying in Length)

BILL OF MATERIALS			
R.C. BRIDGE APPROACH (2 REQ'D)			
REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	WEIGHT (Lbs.)
EPOXY COATED REINFORCING STEEL			
#591e	69	20'-9"	
#5e	2	41'-1"	
#5e	8	37'-5"	
#5e	2	36'-4"	
#5e	42	34'-2"	
#5e	52	20'-2"	
#5e	33	17'-0"	
#5e	25	16'-11"	
#5e	1	6'-10"	
#5e	6	5'-0"	
#5e	1	3'-1"	
#5e	1	2'-5"	
#5e	1	2'-3"	
TOTAL #5e BARS:			5630
TOTAL EPOXY COATED REINFORCING:			5630
CONCRETE			
Reinf. Conc. Bridge Appr., 10"			103 SYS
MISCELLANEOUS			
Surface Seal			924 SFT
Dense Graded Subbase			17 CYS



#591e x 20'-9"



SECTION A-A

NOT TO SCALE
(Refer to INDOT Std 609-RCBA-03 for Complete Detail)

LEGEND

T - Denotes Top Mat of Reinforcing Steel
B - Denotes Bottom Mat of Reinforcing Steel

NOTES:

1. For Type I-A Joint see INDOT Std. Dwg. 609-BRJT-01.
2. For reinforcing steel details, see INDOT Std. Dwg. 703-BRST-01.
3. R.C. Bridge Approach shall be surface sealed.

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: BAC

HAMILTON COUNTY
HIGHWAY DEPARTMENT

R.C. BRIDGE APPROACH

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
AS SHOWN	
SURVEY BOOK	SHEET
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SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE, CLASS C, SUPERSTR	CONCRETE, CLASS C, SUBSTR	CONCRETE, CLASS A, SUBSTR	CONCRETE, CLASS B, ABOVE FTG.	CONCRETE, CLASS B, IN FTG.	RAILING, CONCRETE, PF-2	REINF. BARS	REINF. BARS, EPOXY COATED	RAILING, TS-1	GUARDRAIL TRANSITION, TGS-1 MOD.	THREADED TIE BAR ASSEMBLY, E.C.	REINF. CONC. BRIDGE APPROACH (10 IN.)	DENSE GRADED SUBBASE
	CYS	CYS	CYS	CYS	CYS	CYS	LBS	LBS	LFT	EACH	EACH	SYS	CYS
BENT #1								3607					
BENT #2								2590					
BENT #3								2590					
BENT #4								3607					
SUPERSTRUCTURE	175							29866	113	4	36		
R.C. BRIDGE APPROACH								11260				206	34
TOTALS	175							53520	113	4	36	206	34

ITEM	CLASS 2 RIPRAP	CLASS 1 RIPRAP	PIPE, END BENT DRAIN, 6 IN.	GEOTEXTILE FOR RIPRAP TYPE 3	FLOWABLE BACKFILL, REMOVABLE	PILES: STEEL H (HP 12x53) NO.	PILES: STEEL H (HP 12x53) LFT	PILES: DYNAMIC PILE LOAD TEST	PILES: TEST PILE, INDICATOR, PRODUCTION	PILES: TEST PILE, INDICATOR, RESTRIKE	PILES: PILE SHOE (HP 12x53)	PILES: STEEL H, REINF. CONC. ENCASED (HP 12x53) NO.	PILES: STEEL H, REINF. CONC. ENCASED (HP 12x53) LFT	EXCAVATION: WET	EXCAVATION: WATERWAY	EXCAVATION: DRY	SURFACE SEAL**	FIBER WRAP CASING SYSTEM**
	TON	TON	EACH	SYS	CYS	NO.	LFT	EACH	LFT	EACH	EACH	NO.	LFT	CYS	CYS	CYS	SFT	SFT
BENT #1		98		144	12	1	38		48	1	2							
BENT #2	162			152		2	64				2	2	24					452
BENT #3	163			152		1	32		42	1	2	2	24					452
BENT #4		93		139	12	2	74				2							
SUPERSTRUCTURE																	2642	
R.C. BRIDGE APPROACH																	1848	
TOTALS	325	191		587	24	6	208		90	2	8	4	48				4490	904

** ESTIMATED QUANTITY
LUMP SUM ITEM

Date: Nov 16, 2018, 1:24pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\summary.dwg

BETH A. CARTER
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No. 10809459
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Beth A. Carter 11/7/2018
DESIGN ENGINEER DATE

DESIGNED: BAC DRAWN: VCH
CHECKED: ACS CHECKED: ACS

HAMILTON COUNTY
HIGHWAY DEPARTMENT

BRIDGE SUMMARY OF QUANTITIES

HORIZONTAL SCALE	BRIDGE FILE
NONE	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
NONE	
SURVEY BOOK	SHEET
	28 of 34
CONTRACT	PROJECT
	PB-17-0002

SUMMARY OF QUANTITIES AND APPROACH TABLE

LOCATION (STATION)	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	BEYOND R/W LINE DISTANCE	RADII	GRADE (LESS THAN 10% NOT SHOWN)	EXCAVATION		QC/QA-HMA, 2, 64 SURFACE 9.5mm	QC/QA-HMA, 2, 64 INTER. 19.0mm	QC/QA-HMA, 2, 64 BASE 25.0mm	HMA FOR APPROACHES, TYPE B	ASPHALT MATERIAL FOR TACK COAT	COMPACTED AGGREGATE, NO. 53		MILLING, APPROACH	LIQUID ASPHALT SEALANT	SUBGRADE TREATMENT, TYPE 1C	JOINT ADHESIVE	
									#/SYS.											
		"W"	"L"		"R"	1	CYS.		165	330	440			PVMT	SHR.				SURFACE	INTER.
		FEET	FEET	FEET	FEET	%	CUT	FILL	TONS	TONS	TONS	TONS	SYS	TONS		SYS	LFT	SYS	LFT	
Line "B"																				
52+87.11 to 53+47.11	Secondary Arterial	Varies	60.0						10.0				126.7		11.0	126.7	60.0		60.0	
53+47.11 to 54+41.92	Secondary Arterial	34	94.81						30.0	59.0	79.0		1074.6		27.0		284.4	410.9	284.4	284.4
55+58.49 to 57+00.00	Secondary Arterial	34	141.51						44.0	88.0	118.0		1603.8		28.0		424.5	613.2	424.5	424.5
57+00.00 to 57+60.00	Secondary Arterial	Varies	60.0						10.0				126.7		18.0	126.7	60.0		60.0	
Drives																				
53+06.50	Mod. Drive Appr.											0.9				9.7				
53+43.00	Mod. Drive Appr.											0.9				10.2				
TOTALS:									95.0	147.0	196.0	1.8	2931.8		84.0	273.3	828.9	1024.1	828.9	708.9
ROUNDED TOTALS:									95	147	196	2	2932		84	274	829	1025	829	709

FENCE SUMMARY TABLE

FENCE, FARM FIELD, RESET	
LOCATION	LENGTH
Southwest Corner	20 LFT

MAILBOX SUMMARY TABLE

MAILBOX ASSEMBLY, SINGLE	
LOCATION	NO.
Line "B"	
53+21.00	1

GUARDRAIL SUMMARY TABLE

FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	GUARDRAIL TRANSITION, TYPE TGB	W-BEAM GUARDRAIL 6'-3" POST SPACING	GUARDRAIL END TREATMENT, OS	GUARDRAIL, REMOVE	GUARDRAIL, END TREATMENT, REMOVE
EXCLUDES END TREATMENTS					EACH	LFT.	EACH	LFT.	EACH
Line "B"									
53+97.11	54+59.61			X		62.50	1		
	54+47.06	X					1		
55+40.81	56+47.06	X				106.25	1		
55+53.36				X			1		
54+29.00	54+65.00	X						36	
54+31.50	54+73.50			X				42	
55+26.50	55+63.00	X						37	
55+37.00	55+66.00			X				29	
TOTALS:						168.75	4	144	
ROUNDED TOTALS:						169	4	144	

TABLE OF R/W MARKERS

LOCATION	LINE	OFFSET LEFT	OFFSET RIGHT	NO.
52+87.00	"B"	X		2
53+50.00	"B"	X	X	2
54+50.00	"B"		X	1
55+00.00	"B"		X	1
55+50.00	"B"	X		2
56+50.00	"B"		X	1
57+50.00	"B"		X	2
TOTALS:				11

SEEDING TABLE

0.16 Acres	
Mulched Seeding, R	880 SYS
Mob. & Demob. for Seeding	4 Each

RIPRAP & SODDING SUMMARY TABLE

FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	RIPRAP ACTUAL LENGTH	RIPRAP CLASS 1	RIPRAP REVETMENT	RIPRAP GEOTEXTILE TYPE 3	SODDING FOR DITCHES	SODDING FOR SHOULDERS	SODDING FOR LAWN	WATER
					LFT	TONS	TONS	SYS	SYS	SYS	SYS	kGAL
Line "B"												
For Ditch Lining												
53+50.00	54+71.00			X			74.1	141.2				
For 2:1 Foreslopes												
55+29.00	56+97.00	X					104.3	196.7				
For Bank Stabilization												
Southeast Corner				X		122.2		160.0				
TOTALS:						122.2	178.4	497.9				
ROUNDED TOTALS:						122	179	498				

PAVED SIDE DITCH, REMOVE TABLE

FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	LFT
Line "B"					
54+18.00	54+95.00			X	77.0
TOTALS:					77.0

BENCH MARK TABLE*

STATION	LOCATION	BENCH MARK
		1 EACH
TOTAL		1 EACH

* See Special Provision SP 18, Benchmark for Additional Information.

EARTHWORK SUMMARY (Cu. Yards)

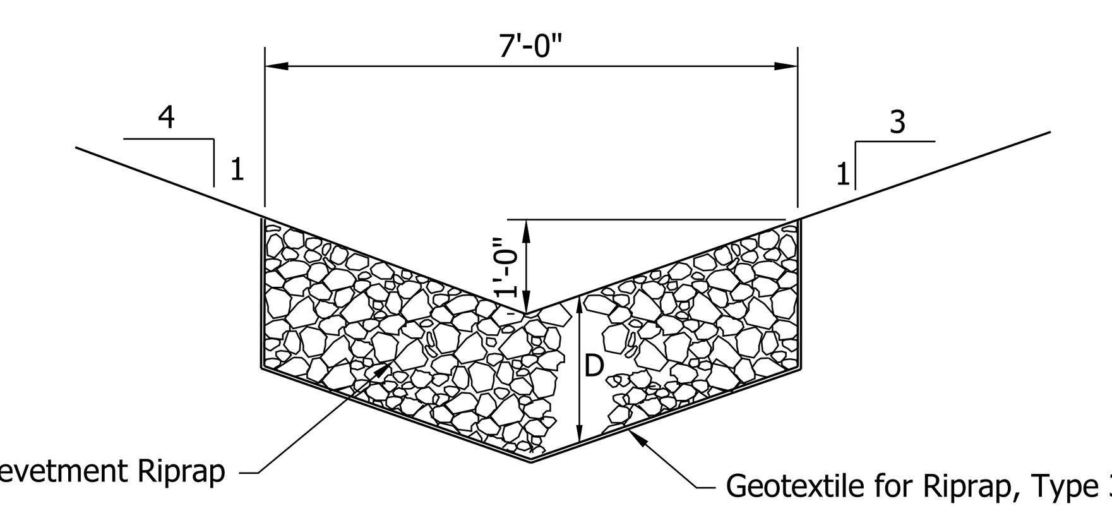
TOTAL PROJECT TO BE ONE BALANCE

	Cut	Fill Available	Benching	Excavation Soft Ditch Soils	B-Borrow	Fill	Fill + 25%	Benching + 25%
Line								
"B"	245	245	160			350	438	200
Soft Ditch Soil				270	270			
TOTALS	245	245	160	270	270	350	438	200

Common Excavation		Fill Available	
Cut	245	Cut	515
Soft Ditch Soil	+ 270	Benching	+ 160
Excavation	515		675

Fill Required		Borrow/Waste	
Fill + 25%	438	Fill Req'd	638
Benching + 25%	200	Fill Available	675
	638		(38) Waste

EXCAVATION, COMMON	515 CYD
WASTE	-38 CYD
B-BORROW (FOR SOFT DITCH SOIL)	270 CYD



DETAIL OF RIPRAP V-BOTTOM DITCH

Scale: 1"=2'

Revetment Riprap - D=18"

Date: Nov 16, 2018, 1:24pm User Name: Tracy
File: S:_2017\217-0030\Bridge\CAD\Plans\Misc Table.dwg

BETH A. CARTER REGISTERED No. 10809459 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	[signature] DESIGN ENGINEER	11/7/2018 DATE	
DESIGNED: BAC	DRAWN: TAM		
CHECKED: ACS	CHECKED: ACS		

HAMILTON COUNTY
HIGHWAY DEPARTMENT

APPROACH TABLE
& SUMMARY OF QUANTITIES

HORIZONTAL SCALE	BRIDGE FILE
----	HAMILTON 00004
VERTICAL SCALE	DESIGNATION

SURVEY BOOK	SHEET
	29 of 34
CONTRACT	PROJECT
	PB-17-0002

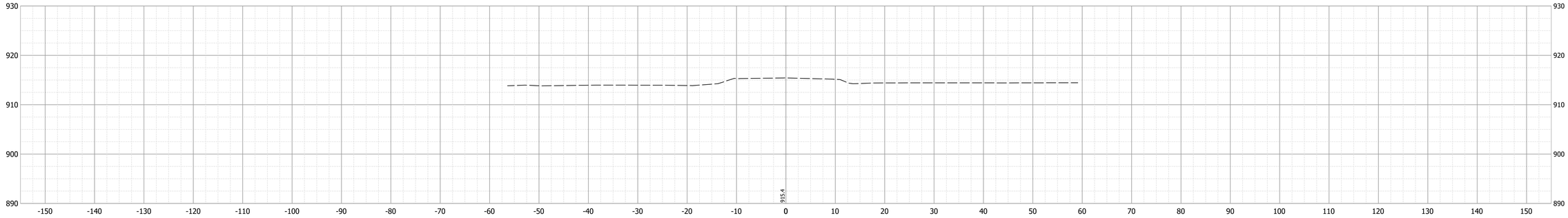
BEGIN INCIDENTAL CONSTRUCTION
ZERO SECTION
STA. 52+87.11

AC	VC	AF	VF
0.0	0.0	0.0	0.0

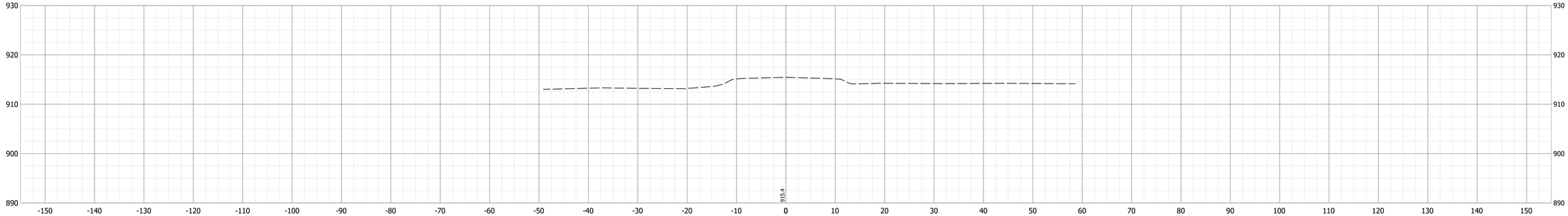
BENCHING
ZERO SECTION
STA. 52+87.11

AC	VC
0.0	0.0

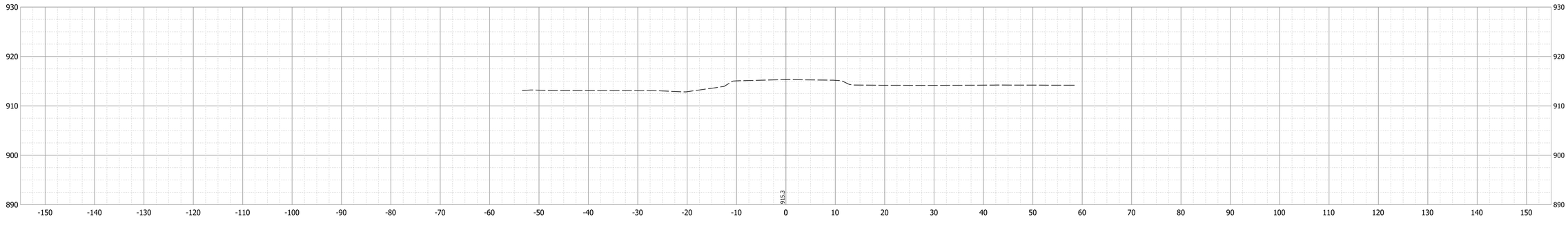
52+50



52+00



51+50



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RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

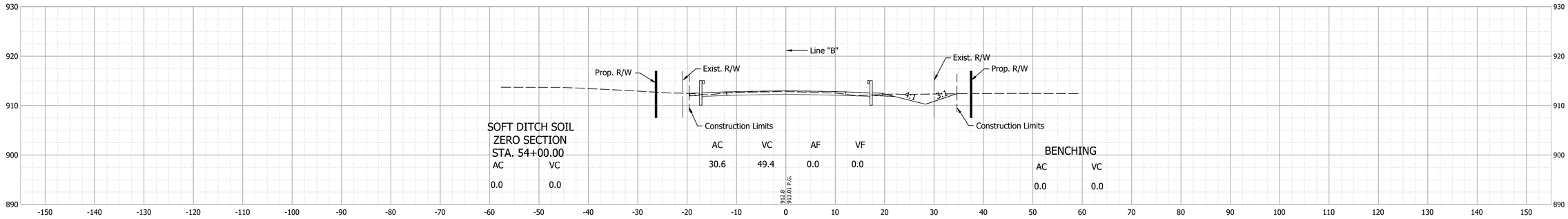
DESIGNED: JAW DRAWN: TAM
CHECKED: ACS CHECKED: JAW

HAMILTON COUNTY
HIGHWAY DEPARTMENT

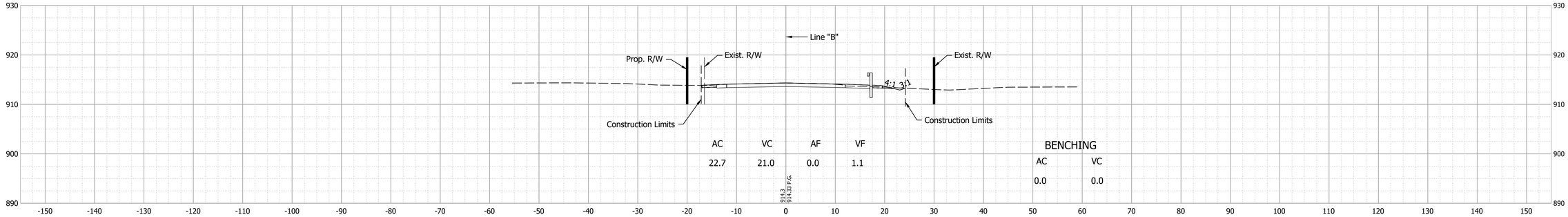
CROSS SECTIONS LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'-0"	
SURVEY BOOK	SHEET
	30 of 34
CONTRACT	PROJECT
	PB-17-0002

54+00

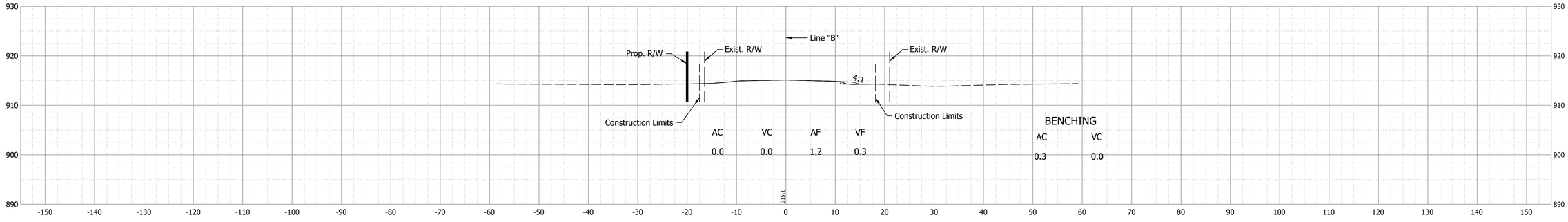


53+50



BEGIN PROJECT
STA. 53+47.11

53+00



DENOTES LIMITS OF BENCHING

DENOTES LIMITS OF SOFT DITCH SOIL

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HAMILTON COUNTY
HIGHWAY DEPARTMENT

CROSS SECTIONS LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'-0"	
SURVEY BOOK	SHEET
	31 of 34
CONTRACT	PROJECT
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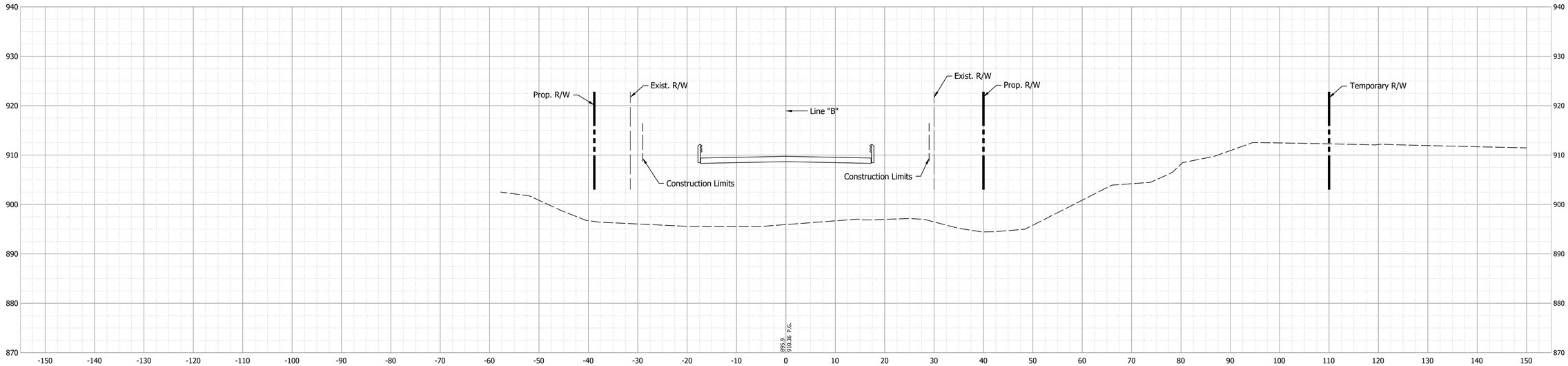
Date: Nov 16, 2018, 1:24pm User Name: Tracy
File: S:_2017\217-0000\Bridge\Cad\base\corridor.dwg

55+00



SOFT DITCH SOIL
ZERO SECTION
STA. 54+68.00

AC	VC
0.0	8.0

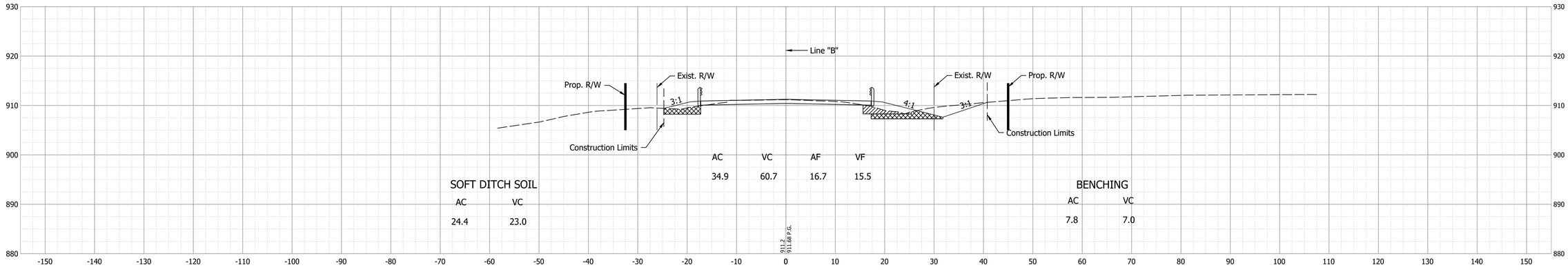
VERTICAL SECTION
STA. 54+68.00

AC BK	AC AH	VC BK	VC AH	AF BK	AF AH	VF BK	VF AH
34.9	0.0	23.3	0.0	16.7	0.0	11.2	0.0

BENCHING
ZERO SECTION
STA. 54+68.00

AC	VC
0.0	3.0

54+50



SOFT DITCH SOIL

AC	VC
24.4	23.0

AC	VC	AF	VF
34.9	60.7	16.7	15.5

BENCHING

AC	VC
7.8	7.0

DENOTES LIMITS OF BENCHING

DENOTES LIMITS OF SOFT DITCH SOIL

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HAMILTON COUNTY
HIGHWAY DEPARTMENT

CROSS SECTIONS LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'-0"	
SURVEY BOOK	SHEET
	32 of 34
CONTRACT	PROJECT
	PB-17-0002

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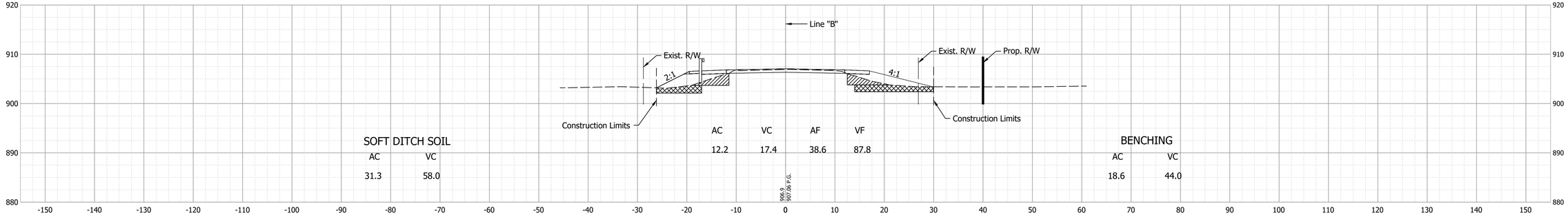
56+50



SOFT DITCH SOIL

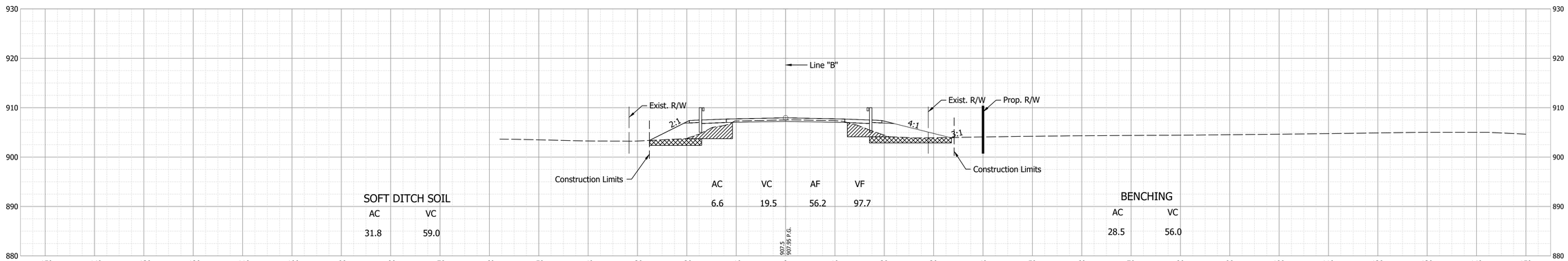
AC	VC
31.3	58.0

AC	VC	AF	VF
12.2	17.4	38.6	87.8

BENCHING

AC	VC
18.6	44.0

56+00



SOFT DITCH SOIL

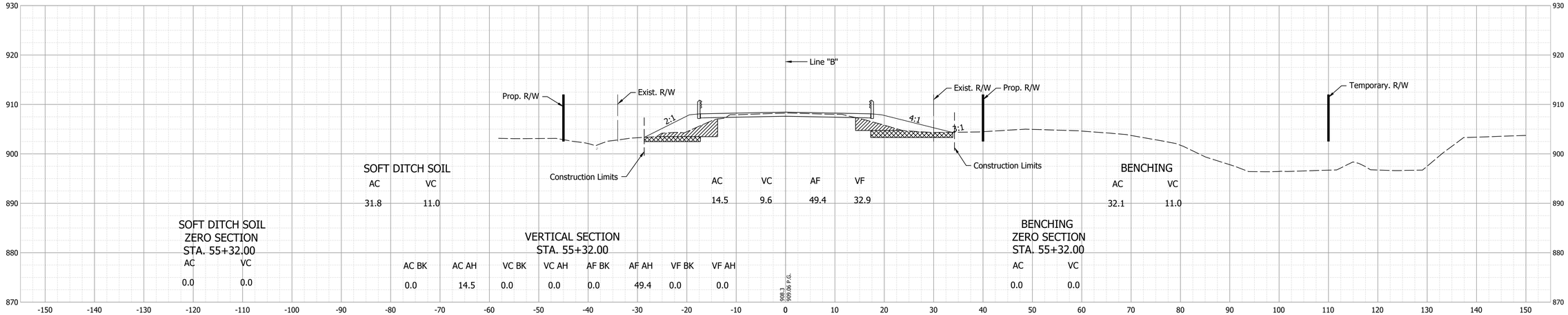
AC	VC
31.8	59.0

AC	VC	AF	VF
6.6	19.5	56.2	97.7

BENCHING

AC	VC
28.5	56.0

55+50



SOFT DITCH SOIL

AC	VC
31.8	11.0

AC	VC	AF	VF
14.5	9.6	49.4	32.9

BENCHING

AC	VC
32.1	11.0

SOFT DITCH SOIL
ZERO SECTION
STA. 55+32.00

AC	VC
0.0	0.0

VERTICAL SECTION
STA. 55+32.00

AC BK	AC AH	VC BK	VC AH	AF BK	AF AH	VF BK	VF AH
0.0	14.5	0.0	0.0	0.0	49.4	0.0	0.0

BENCHING
ZERO SECTION
STA. 55+32.00

AC	VC
0.0	0.0

DENOTES LIMITS OF BENCHING

DENOTES LIMITS OF SOFT DITCH SOIL

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HIGHWAY DEPARTMENT

CROSS SECTIONS LINE "B"

HORIZONTAL SCALE	BRIDGE FILE
1"=10'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'-0"	
SURVEY BOOK	SHEET
	33 of 34
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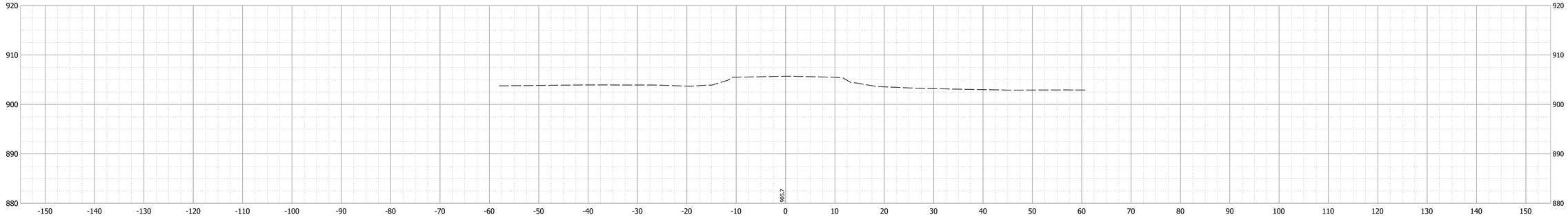
58+00



SOFT DITCH SOIL
ZERO SECTION
STA. 57+60.00

AC	VC
0.0	4.0

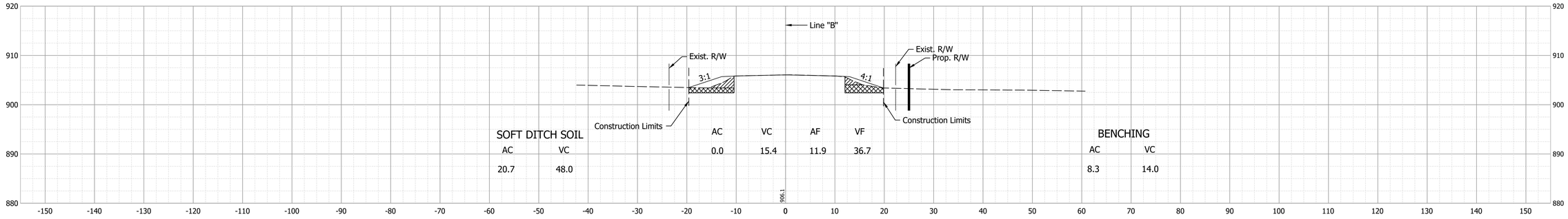
END INCIDENTAL CONSTRUCTION
ZERO SECTION
STA. 57+60.00

AC	VC	AF	VF
0.0	0.0	0.0	2.2

BENCHING
ZERO SECTION
STA. 57+60.00

AC	VC
0.0	2.0

57+50



SOFT DITCH SOIL

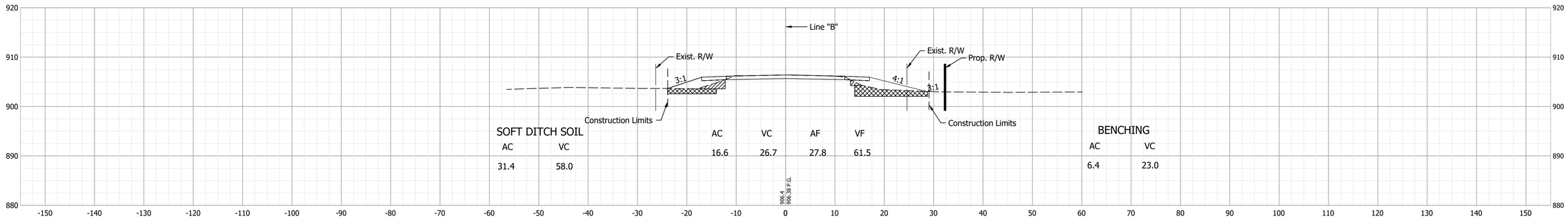
AC	VC
20.7	48.0

AC	VC	AF	VF
0.0	15.4	11.9	36.7

BENCHING

AC	VC
8.3	14.0

END PROJECT
57+00



SOFT DITCH SOIL

AC	VC
31.4	58.0

AC	VC	AF	VF
16.6	26.7	27.8	61.5

BENCHING

AC	VC
6.4	23.0

DENOTES LIMITS OF BENCHING

DENOTES LIMITS OF SOFT DITCH SOIL

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HIGHWAY DEPARTMENT

CROSS SECTIONS LINE "B"

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1"=10'-0"	HAMILTON 00004
VERTICAL SCALE	DESIGNATION
1"=10'-0"	
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